



# **IP DSLAM Switch**

**IDL-2402**

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## **User's Manual**

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**FCC Warning**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**FCC Caution**

To assure continued compliance (example-use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two conditions: (1) This device may not cause harmful interference, and (2) this Device must accept any interference received, including interference that may cause undesired operation.

**CE mark Warning**

The is a class A device, In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

**Safety**

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

**Revision**

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Model: IDL-2402

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# 1. Introduction

Planet IDL-2402 is a 24-port ADSL/ADSL2/ADSL2+ mini IP DSLAM, which has one 1000Base-T uplink Interface, for efficient scalability and easy deployment in the network with small ADSL environment. With built-in POTS splitter subscriber ports, the PLANET IDL-2402 is a Cost-Effective Solution for Network Service Provider to offer excellent services to multiple subscribers.

The PLANET IDL-2402 supports local and remote managed capabilities of CLI, SNMP, Telnet via RS-232 Console Port and Web GUI management interface. Via the user-friendly Web GUI, the PLANET IDL-2402 can be managed by workstations running standard web browsers that provide the easy-to-use operation and convenient maintenance.

Furthermore, the PLANET IDL-2402 provides many features such as QoS, VLAN, Multicast, Bandwidth Management, Traffic Prioritization, and Access Control List. With the advanced QoS features, IDL-2402 is an ideal solution for next generation broadband network to deliver rich video contents, DSL, POTS, and VoIP service over ADSL2+ connection.

## 1.1 Product Features

---

- ◆ 24-Port ADSL/ADSL2/ADSL2+ subscriber interface with build-in POTS splitter
- ◆ DMT data rate: Downstream up to 25 Mbps / Upstream up to 3Mbps
- ◆ 1000Base-T uplink interface
- ◆ Web GUI based management
- ◆ Local RS-232 CLI and Ethernet SNMP / Telnet / SSH management
- ◆ Firmware upgradeable via FTP
- ◆ Configuration backup and restoration via TFTP
- ◆ Supports IPSec / L2TP / PPTP VPN pass-through
- ◆ Supports 4K MAC address
- ◆ Supports IEEE 802.1q Tag-based VLAN and Protocol-based VLAN
- ◆ Layer 2 / 3 filtering based on MAC, IP, Protocol, Port number and Ether Type
- ◆ Access Control List by MAC / IP / Protocol / Port number
- ◆ Traffic prioritization (802.1p)
- ◆ Supports IGMP snooping / proxy per IGMP v1, v2, and v3
- ◆ FAN alarm indicating
- ◆ Temperature monitoring and system overheating trap functionality



## 1.2 Package Contents

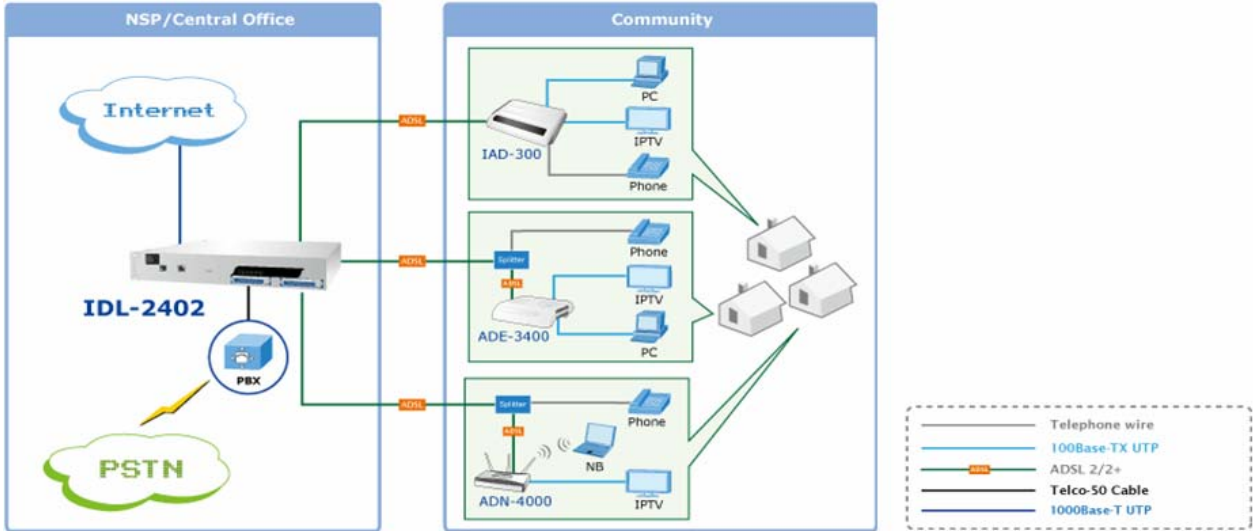
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- ◆ IDL-2402 Unit x 1
- ◆ AC Power Cord x 1
- ◆ CD (Containing User's Manual, QIG) x 1
- ◆ Quick Installation Guide x 1
- ◆ 2-Meter Telco-50 Cable x 2
- ◆ Console Cable x 1
- ◆ Rack-mounting x 2
- ◆ Screw Package x 2

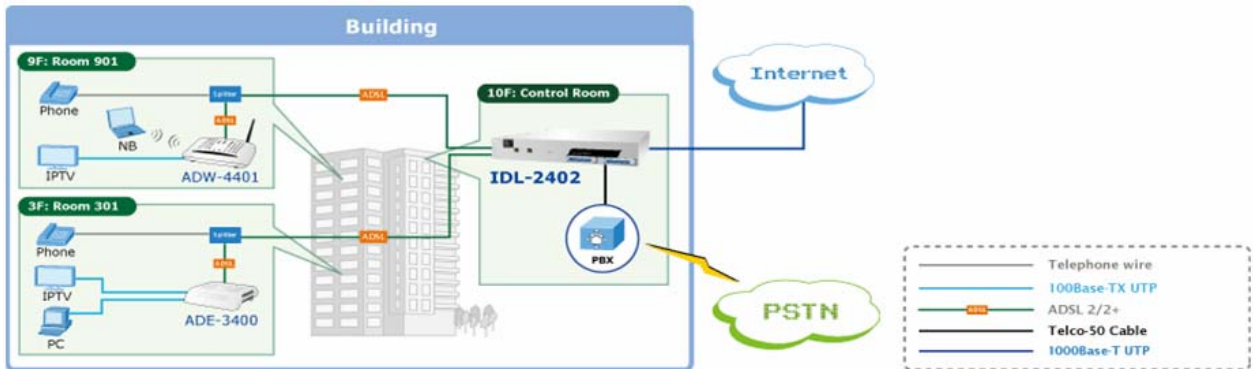
### 1.3 Application

The PLANET IDL-2402 offers the benefit of high performance to central office co-location and MTU (Multi-Tenant Unit) / MDU (Multi-Dwelling Unit) markets. It provides broadband data service over existing copper wires without affecting the conventional voice service by 24 subscriber ports with built-in POTS splitter. A PLANET IP DSLAM is the perfect solution for NSP a cost-effective but high-value centrally management capability.

#### Application 1: For Community



#### Application 2: For Building



## 1.4 Outlook

### 1.4.1 Front Panel

The front panels of IDL-2402 are shown below.



**IDL-2402**

### LED Definition

LED	Color	LED Description	
SYS	Green	Normal Operation	
	Red	Self-test fail	
ALM	Green	Normal Operation	
	Red	To indicate the system alarm status	
DSL status	Green	On	ADSL Port is activated and linked
		Off	ADSL Port is Disabled
		Flash	ADSL Port is activated but not linked
Uplink	Orange	On	Uplink Port connect with 100/1000Mbps Ethernet link
		Off	Uplink Port connect with 10Mbps Ethernet link
	Green	On	Active
		Off	Inactive
		Flash	Uplink Port Transmit / receive data

### Port Definition

Port	Port Description
AC PWR	AC Power cord plug-in, 100 - 240VAC is allowed.
Uplink Port	Gigabit Ethernet port. 10/100/1000Mbps, auto-negotiation, auto-MDI
Console Port	RS-232 port for system configuration and maintenance. Default settings: <b>9600, 8, N, 1</b>
PHONE	RJ-21 connector for connecting POTS lines.
LINE	RJ-21 connector for connecting DSL lines.

## 1.5 Technical Specifications

<b>Product</b>	<b>IP DSLAM</b>	
<b>Model</b>	<b>IDL-2402</b>	
<b>Hardware Specification</b>		
<b>Case</b>	1.5U high box-type with a rack-mountable enclosure	
<b>Ports</b>	<b>Uplink</b>	1 x RJ-45 (10/100/1000Base-T)
	<b>Console</b>	RS-232 Serial Port (9600, 8, N, 1)
	<b>LINE</b>	1 x RJ-21 Connector
	<b>PHONE</b>	1 x RJ-21 Connector
<b>LED Indicators</b>	1 x SYS LED 1 x ALM LED 1 x Uplink LED 24 x ADSL LEDs	
<b>Software Specification</b>		
<b>Standard</b>	Compliant with ADSL standard <ul style="list-style-type: none"> <li>- ANSI T1.413 issue 2</li> <li>- G.dmt (ITU G.992.1)</li> <li>- G.lite (ITU G.992.2)</li> <li>- G.hs (ITU G.994.1)</li> </ul> Capable of ADSL2 standard <ul style="list-style-type: none"> <li>- G.dmt.bis (ITU G.992.3)</li> </ul> Capable of ADSL2+ standard <ul style="list-style-type: none"> <li>- G.dmt.bisplus (ITU G.992.5)</li> </ul>	
<b>System</b>	<ul style="list-style-type: none"> <li>- Subscriber interface with built-in POTS splitter</li> <li>- Downstream DMT data rate up to 25 Mbps</li> <li>- Upstream DMT data rate up to 3 Mbps (Annex M)</li> <li>- Distance up to 18 kft</li> <li>- 8 PVCs per xDSL port</li> <li>- DHCP forward</li> <li>- DHCP relay agent</li> <li>- PPPoE relay</li> <li>- IPSec/L2TP/PPTP VPN pass-through function</li> <li>- PPPoA to PPPoE inter-working</li> </ul>	
<b>Bridge Function</b>	<ul style="list-style-type: none"> <li>- Supports IPv4 packet</li> <li>- Supports IEEE802.1d Ethernet bridge function between trunk Ether port and ATM VCs</li> <li>- Supports static source MAC table provisioning, automatic source MAC learning and block duplicate ones</li> <li>- Supports 4K static MAC address table</li> <li>- 128 MAC address per x DSL port</li> </ul>	
<b>VLAN Function</b>	<ul style="list-style-type: none"> <li>- IEEE 802.1q Port-based / Protocol-based VLAN</li> <li>- 512 non-stacked VLAN-ID simultaneously ranging from 1 to 4095</li> <li>- VLAN stacking and VLAN cross-connect</li> <li>- IP Spoofing prevention</li> <li>- MAC anti-Spoofing</li> <li>- Port isolation functionality</li> <li>- Static VLAN group and membership provisioning</li> </ul>	
<b>Multicast</b>	<ul style="list-style-type: none"> <li>- IP multicast forwarding</li> </ul>	

<b>Function</b>	<ul style="list-style-type: none"> <li>- Complies with RFC2684 bridged payload encapsulation mode</li> <li>- Up to 256 multicast groups and 512 copies simultaneously</li> <li>- Up to 48 profile-based Multicast Access Control</li> <li>- Limit maximum number of IGMP groups joined per bridge port</li> <li>- IGMP snooping / proxy per IGMP v1, v2, and v3</li> <li>- IGMP proxy and IGMP snooping Selection</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>- Supports Layer-2 frame filtering based on MAC and Ether Type</li> <li>- Supports Layer-3 filtering based on IP, Protocol, and Port number</li> <li>- IEEE 802.1X authentication</li> </ul>
<b>QoS</b>	<ul style="list-style-type: none"> <li>- Control the bandwidth occupied by broadcast, multicast, and unknown unicast (flooding)</li> <li>- Rate-limit profile binding per bridge port</li> <li>- Three Color Marking (TCM) policer</li> <li>- Ethernet rate limit per bridge port</li> <li>- ToS (type of service) / DiffServ (differentiated services) stripping and priority queuing</li> <li>- DSCP mapping to 802.1p</li> <li>- Selectable adopted priority queue mechanisms according to Strict Priority Queue (SPQ) and Weighted Fair Queue (WFQ)</li> <li>- Configurable mapping function between ATM PVC and 802.1p priority queue</li> <li>- Supports IP CoS technology</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>- Web based GUI management</li> <li>- Local RS-232 CLI, and Ethernet SNMP / Telnet / SSH management</li> <li>- Remote in-band SNMP / Telnet / SSH management</li> <li>- Firmware upgradeable via FTP</li> <li>◆ SNMP v1, v2c</li> </ul>

## 2. Installation

The followings are instructions for setting up the IDL-2402. Refer to the illustration and follow the simple steps below to quickly install your IP DSLAM.

### 2.1 Safety Instruction

---

The following is the safety instructions for IP DSLAM before installing.

- >> The maximum operating temperature of the IP DSLAM is 65°C. Care must be taken to allow sufficient air circulation or space between units when the IP DSLAM is installed inside a closed rack assembly and racks should safely support the combined weight of all IP DSLAM.
- >> The connections and equipment that supply power to the IP DSLAM should be capable of operating safely with the maximum power requirements of the IP DSLAM. In the event of a power overload, the supply circuits and supply wiring should not become hazardous.
- >> The AC power cord must plug into the right supply voltage. Make sure that the supplied AC voltage is correct and stable. If the input AC voltage is over 10% lower than the standard may cause the IP DSLAM to malfunction.
- >> Generally, when installed after the final configuration, the product must comply with the applicable safety standards and regulatory requirements of the country in which it is installed. If necessary, consult for technical support.
- >> A rare condition can create a voltage potential between the earth grounds of two or more buildings. If products installed in separate building are interconnected, the voltage potential can cause a hazardous condition. Consult a qualified electrical consultant to determine whether or not this phenomenon exists and, if necessary, implement corrective action before interconnecting the products. If the equipment is to be used with telecommunications circuit, take the following precautions:
  - Never install telephone wiring during a lightning storm.
  - Never install telephone jacks in wet location unless the jack is specially - designed for wet location.
  - Never touch un-insulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
  - Caution when installing or modifying telephone lines (other than a cordless telephone) during an electrical storm. There is a remote risk of electric shock from lightning.
  - Do not use a telephone or other equipment connected to telephone lines to report a gas leak in the vicinity of the leak.

## 2.2 Hardware Installation

---

The PLANET IDL-2402 is a 1.5U high box-type IP DSLAM with rack-mountable enclosure. It can be installed in a standard 19-inch rack by using the mounting brackets provided. Mount the shelf on the rack using the large screws provided. The procedure to connect and wire the system is as follows.

### 2.2.1 System Requirements

- Workstation with Windows NT/2000/XP
- RJ-45 cables
- RJ-11 cables
- Telco-50 cables
- RS-232 console cable
- <Optional> MDF Patch Panel (Model No.: IDL-PAN-48).

### 2.2.2 Installation Procedure

#### **Step 1: Ground the IP DSLAM by connecting a grounded wire (Optional).**

##### **Ground Connections**

This section provides the grounding rule for the IDL-2402. All remote system sites must be properly grounded for optimum system performance.

##### **■ In Central Office:**

There should be a CO GND that is adequately grounded. If the measured resistance from the grounding screw (on the rear panel of the DSLAM, refer to below figure) to CO GND is less than 5 Ohm, then it can be assumed that the system is well grounded. If the measured resistance is larger than 5 Ohm, it is recommended to connect the grounding screw to CO GND using #14 or #12 AWG wire gauge conductor.

##### **■ In Remote Cabinet:**

The IDL-2402 should be grounded by connecting a #14 or #12 AWG conductor between the grounding screw (on the rear panel of the DSLAM, refer to below figure) and the earth ground or main grounding bar. The resistance between the chassis and the grounding bar should be less than 25 Ohm.

##### **Rear Panel Connection**



**IDL-2402 grounding screw on the rear panel**

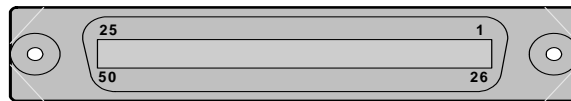
## Step 2: Connecting the ADSL LINE and PHONE interfaces

The IDL-2402 supports 24 ports ADSL subscribers per box. There are two RJ21 50-pin female connectors on the front panel of the system. One for ADSL line and one for POTS interface.

To connect the subscriber lines, use cables with the RJ21 50-pin male connectors. When installing, just plug the end of a cable with connector into the LINE and PHONE interface female connector on the front panel. The other end of the cable is generally tied to the MDF (Main Distribution Frame).

The pin assignment of LINE/PHONE interface is illustrated below (the numbers in the connector figures below represent PIN numbers):

### For port 1~24:



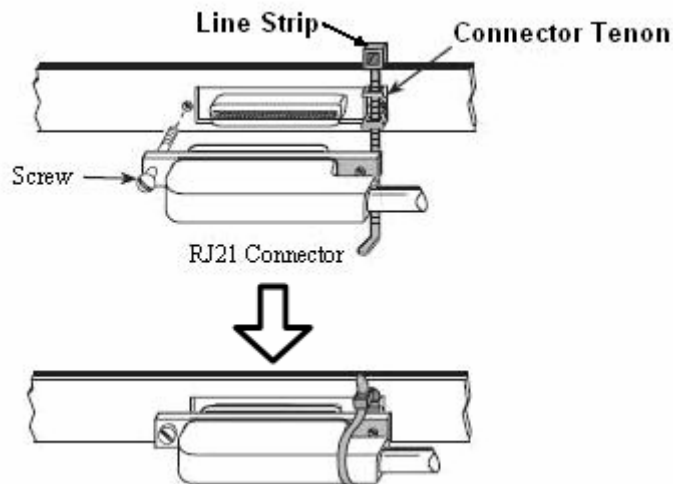
<b>PIN Number</b>	1	2	3	4	5	6	7	8	~	18	19	20	21	22	23	24	25
<b>Port Number</b>	Tip 1	Tip 2	Tip 3	Tip 4	Tip 5	Tip 6	Tip 7	Tip 8	~	Tip 18	Tip 19	Tip 20	Tip 21	Tip 22	Tip 23	Tip 24	X
<b>PIN Number</b>	26	27	28	29	30	31	32	33	~	43	44	45	46	47	48	49	50
<b>Port Number</b>	Ring 1	Ring 2	Ring 3	Ring 4	Ring 5	Ring 6	Ring 7	Ring 8	~	Ring 18	Ring 19	Ring 20	Ring 21	Ring 22	Ring 23	Ring 24	X

### Note:

The MDF Patch panel is optional of standard package.

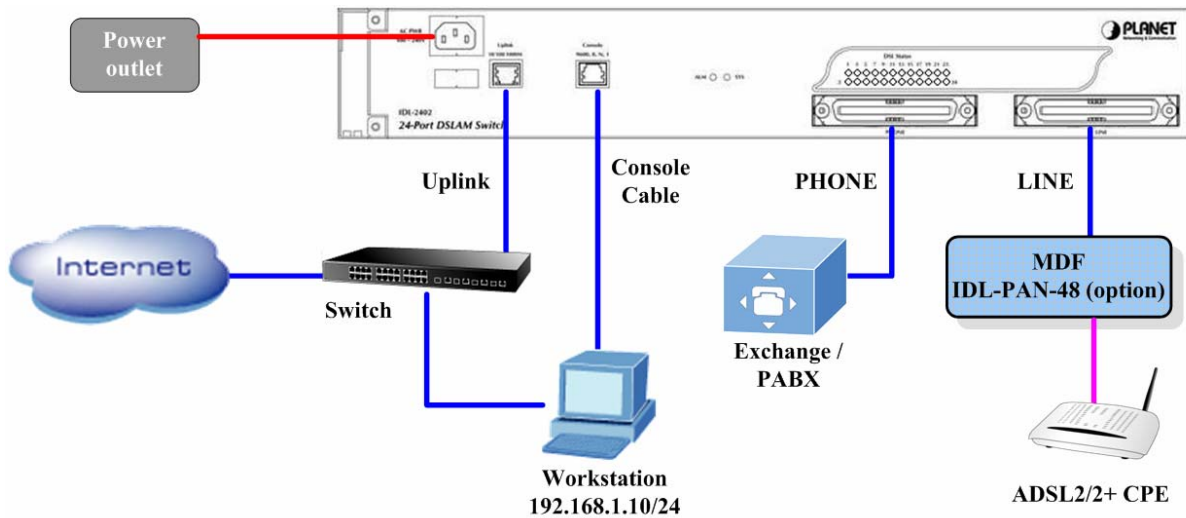
### Note:

Please plug-in the RJ-21 cable with connector Tenon as below figure.





## Front Panel Connection



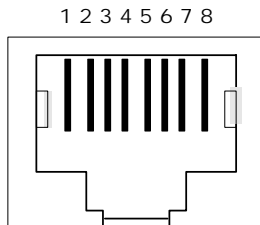
Front panel connection of IDL-2402

### UPLINK Port:

Connect to Internet by RJ-45 cable.

### Console Port:

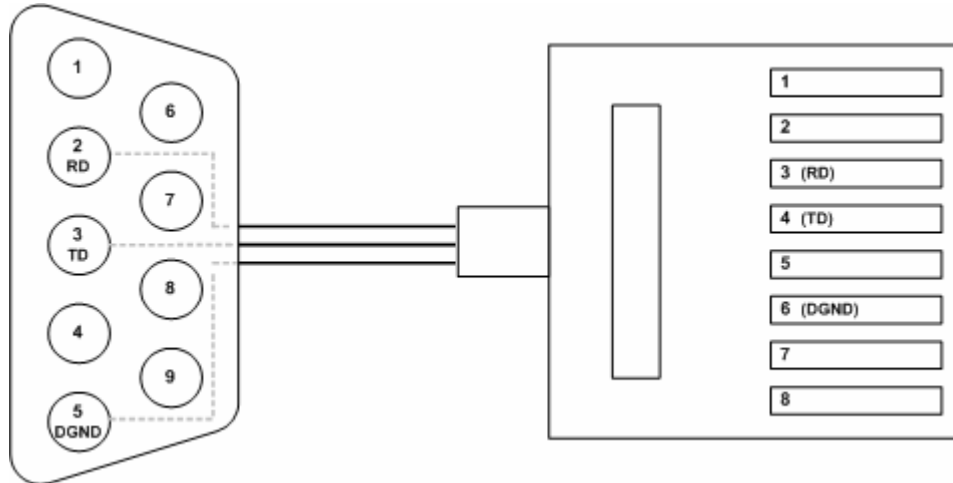
Connect to PC by RS-232 console cable in order to administer your IP DSLAM through CLI. The Console interface on the front panel is the main control interface of the IDL-2402. The RJ45 connector pin assignment is illustrated below:



3	4	6	Other pins
TX	RX	GND	unused

Console Port RJ-45 pin assignment

To connect the host PC to the console port, a RJ45 (male) connector-to-RS232 DB9 (female) connector cable is required. The RJ45 connector of the cable is connected to the Console port of the DSLAM; the DB9 connector of the cable is connected to the PC COM port. The pin assignment of the console cable is shown below:



DB-9F	RJ-45M Pin
	1
	2
Pin 2 RD	3
Pin 3 TD	4
	5
Pin 5 DGND	6
	7
	8

**Pin Assignment of Console Cable**

**Step 3: Hook power cord and apply the power.**

## 2.3 WEB Configuration

This section describes how to use Web Configuration Tool to maintain your IP DSLAM. The IDL-2402 contains a HTTP server. You can login and configure it by using your Web Browser.

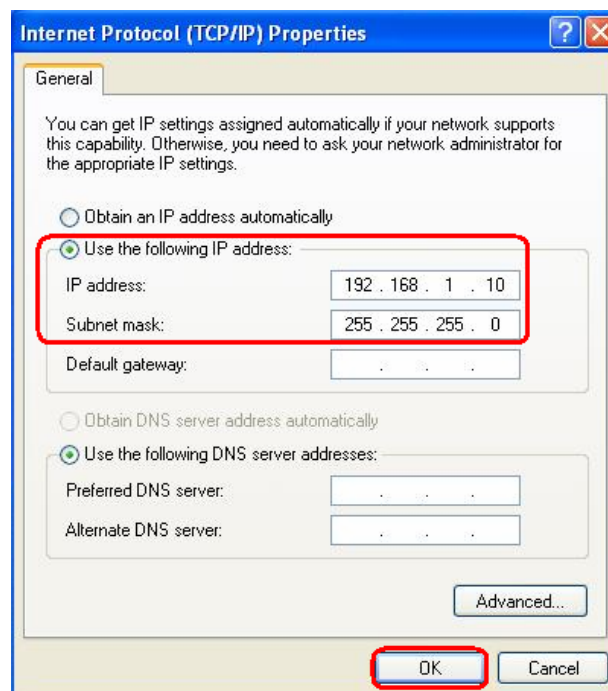
### 2.3.1 System Preparation

Before attempting to configure the IDL-2402, please ensure as below:

Set your computer's IP with the same network mask of the router. **(For example: Router's default IP is 192.168.1.1 / 255.255.255.0)**

Then you can set computer's IP to:

**192.168.1.x / 255.255.255.0.** (The range for x is from 2 to 253)



### 2.3.2 WEB Configuration Procedure

#### Step 1: Using your WEB Browser

Open web browser and type **http://192.168.1.1** in the browser's address box. This IP is the default IP address of IDL-2402. Press Enter.



## Step 2 : Login the IDL-2402

A login page will appear. Please type your username / password and click **“Sign in”**. (The default **username / password** is **admin / admin**)

**Web Interface Login**

Username: admin

Password: [masked]

[Sign in](#)

- Level 1: SuperUser, R/W Management all
- Level 2: Engineer, R/W (Disabled from User Account)
- Level 3: Guest, Read only

After you login the IDL-2402, you will see the system information as below.

**System Information**

Cluster-Main Unit [Refresh](#)

- System
- 802.1x Security
- Bridge
- ADSL
- Traffic
- SNMP
- Maintenance

**ACCESS LOGIN**

Access Level	System Date	FW Boot	Active DB	Current DB
Super user	2008/09/09	Partition-1	Partition-1	Partition-1

**SYSTEM VERSION**

Hardware	Firmware	Software	Web	Circuit:1~24
C	1.00B05	1.00B05	Mx-06.17b	AnnexA

**GIGA STATUS**

Gigal	SYS LED	ALM LED	Bridge MAC	Gigal MAC
Config Enabled	●	●	00:30:4F:71:99:0A	00:30:4F:71:99:09

### Step 3 : Configure the DSL PVC

Go to “**Bridge → Interface Setup → ADSL PVC**” setting screen, select the ADSL port and click “**Create**” to apply the PVC settings.

For example, create PVC-1 to Port 1. The default **VPI / VCI** is **0 / 35**.

The screenshot shows the configuration interface for ADSL PVC. On the left is a navigation menu with the following items: System, 802.1x Security, Bridge, Interface Setup (highlighted), GIGA Bridge, ADSL PVC (highlighted), ADSL Bridge, ADSL Port Security, VLAN Configuration, Access Control, Forwarding, Relay, IGMP, IPoA, ADSL, Traffic, SNMP, and Maintenance. The main area displays configuration options: VPI: 0, VCI: 35, Traffic: Rx Default[UnShaped], Tx Default[UnShaped], Encap: LLC, Protocol Base VLAN: Disabled. Below these are buttons for ALL, Create, Modify, and Delete. A dropdown menu shows 'Port 01~12' and 'PVC-1'. A table lists ports 1 through 12, with port 1 selected. Below the table is a field for 'ATM TRAFFIC PARAMETER'.

Select	Port	VPI	VCI	Rx Traffic	Tx Traffic	ENCAP	Protocol Base VLAN
<input checked="" type="radio"/>	1						
<input type="radio"/>	2						
<input type="radio"/>	3						
<input type="radio"/>	4						
<input type="radio"/>	5						
<input type="radio"/>	6						
<input type="radio"/>	7						
<input type="radio"/>	8						
<input type="radio"/>	9						
<input type="radio"/>	10						
<input type="radio"/>	11						
<input type="radio"/>	12						

This is a close-up view of the configuration table. The configuration options at the top are: VPI: 0, VCI: 35, Traffic: Rx Default[UnShaped], Tx Default[UnShaped], Encap: LLC, Protocol Base VLAN: Disabled. Buttons for ALL, Create, Modify, and Delete are visible. The dropdown menu shows 'Port 01~12' and 'PVC-1'. The table below has the following data for the selected row (Port 1):

Select	Port	VPI	VCI	Rx Traffic	Tx Traffic	ENCAP	Protocol Base VLAN
<input checked="" type="radio"/>	1	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	2						
<input type="radio"/>	3						
<input type="radio"/>	4						
<input type="radio"/>	5						
<input type="radio"/>	6						
<input type="radio"/>	7						
<input type="radio"/>	8						
<input type="radio"/>	9						
<input type="radio"/>	10						
<input type="radio"/>	11						
<input type="radio"/>	12						

#### Step 4 : Enable the ADSL Port Service

Go to “**System → ADSL Port Service**” setting screen, select the ADSL port and Admin is “ON”. Click “**Modify**” to make this Port is ON.

The screenshot shows the 'System >> ADSL Port Service' configuration page. On the left is a blue navigation menu with 'System' expanded and 'ADSL Port Service' selected. The main area has a header 'System >> ADSL Port Service' and a form with 'Admin' set to 'OFF', 'Service Profile' set to '1', 'Spectrum Profile' set to '1', and 'TCA Profile' set to '1'. A 'Modify' button is visible. Below the form is a table with columns: Select, Port, Admin Status, Current Status, Service Profile, Spectrum Profile, and TCA Profile. The first row (Port 1) has 'Admin Status' set to 'OFF' and 'Current Status' set to 'OFF'. A red circle highlights the 'Admin' dropdown and the 'Modify' button in the first screenshot, and the 'Admin Status' column in the second screenshot.

Select	Port	Admin Status	Current Status	Service Profile	Spectrum Profile	TCA Profile
<input checked="" type="radio"/>	1	OFF	OFF	1	1	1
<input type="radio"/>	2	OFF	OFF	1	1	1
<input type="radio"/>	3	OFF	OFF	1	1	1
<input type="radio"/>	4	OFF	OFF	1	1	1
<input type="radio"/>	5	OFF	OFF	1	1	1
<input type="radio"/>	6	OFF	OFF	1	1	1
<input type="radio"/>	7	OFF	OFF	1	1	1
<input type="radio"/>	8	OFF	OFF	1	1	1
<input type="radio"/>	9	OFF	OFF	1	1	1
<input type="radio"/>	10	OFF	OFF	1	1	1
<input type="radio"/>	11	OFF	OFF	1	1	1

You can see the Admin status became to ON.

The screenshot shows the 'System >> ADSL Port Service' configuration page after modification. The 'Admin' dropdown is now set to 'ON'. The 'Modify' button is still present. The table below shows that the 'Admin Status' for Port 1 has changed to 'ON', while the 'Current Status' remains 'OFF'. A red circle highlights the 'Admin Status' column in this screenshot.

Select	Port	Admin Status	Current Status	Service Profile	Spectrum Profile	TCA Profile
<input checked="" type="radio"/>	1	ON	OFF	1	1	1
<input type="radio"/>	2	OFF	OFF	1	1	1
<input type="radio"/>	3	OFF	OFF	1	1	1
<input type="radio"/>	4	OFF	OFF	1	1	1
<input type="radio"/>	5	OFF	OFF	1	1	1
<input type="radio"/>	6	OFF	OFF	1	1	1
<input type="radio"/>	7	OFF	OFF	1	1	1
<input type="radio"/>	8	OFF	OFF	1	1	1
<input type="radio"/>	9	OFF	OFF	1	1	1
<input type="radio"/>	10	OFF	OFF	1	1	1
<input type="radio"/>	11	OFF	OFF	1	1	1

## Step 5 : Connect the ADSL2/2+ CPE to Patch Panel

Connect the ADSL2/2+ CPE to Patch Panel and configure it, the VPI / VCI value must be the same with IDL-2402.

After finish setting, the CPE will establish the ADSL connection with IDL-2402. You can check the connection status as below figure. The Current Status is ON.

Cluster-Main Unit Refresh

- System
  - System Info
  - Board IP Setup
  - Ethernet Port Service
  - ADSL Port Service
  - CLI Setup
  - Cluster Setup
  - System Inventory
  - System Contact Info
  - SNTP
  - IP Routes
  - User Administration
  - Duplicator
  - 802.1x Security
  - Bridge
  - ADSL
  - Traffic
  - SNMP
  - Maintenance

Admin: ON Service Profile: 1 Spectrum Profile: 1 TCA Profile: 1 All Modify

The Service Profile range from 1 to 120  
The Spectrum Profile range from 1 to 120  
The TCA Profile range from 1 to 64

Port 01~12 Query

Select	Port	Admin Status	Current Status	Service Profile	Spectrum Profile	TCA Profile
<input checked="" type="radio"/>	1	ON	ON	1	1	1
<input type="radio"/>	2	OFF	OFF	1	1	1
<input type="radio"/>	3	OFF	OFF	1	1	1
<input type="radio"/>	4	OFF	OFF	1	1	1
<input type="radio"/>	5	OFF	OFF	1	1	1
<input type="radio"/>	6	OFF	OFF	1	1	1
<input type="radio"/>	7	OFF	OFF	1	1	1
<input type="radio"/>	8	OFF	OFF	1	1	1
<input type="radio"/>	9	OFF	OFF	1	1	1
<input type="radio"/>	10	OFF	OFF	1	1	1
<input type="radio"/>	11	OFF	OFF	1	1	1
<input type="radio"/>	12	OFF	OFF	1	1	1

[ SERVICE PROFILE | SPECTRUM PROFILE | TCA PROFILE ]

Now the clients can access to Internet through IDL-2402.

## Step 6 : Save the running configuration to Flash

Remember to save your running configuration to the flash, or the settings will be lost if you power-off IDL-2402.

Go to “**Maintenance → Database**” setting screen, select the “**(D) Save Running Config to Flash (System Config)** “. There are two partitions on flash, select your Partition which you want to save and click “**Write Running**”. The configuration will save to the Flash.

Cluster-Main Unit Refresh

- System
- 802.1x Security
- Bridge
- ADSL
- Traffic
- SNMP
- Maintenance
  - SYS Log Server
  - Database
  - Firmware Update
  - Boot Code Update
  - ATM Loopbacks
  - Fault Management
  - Performance Monitoring

Maintenance>>Database

DB Config Select: (D) Save Running Config to Flash (System Config)

Write flash at: Partition1 Write\_Running

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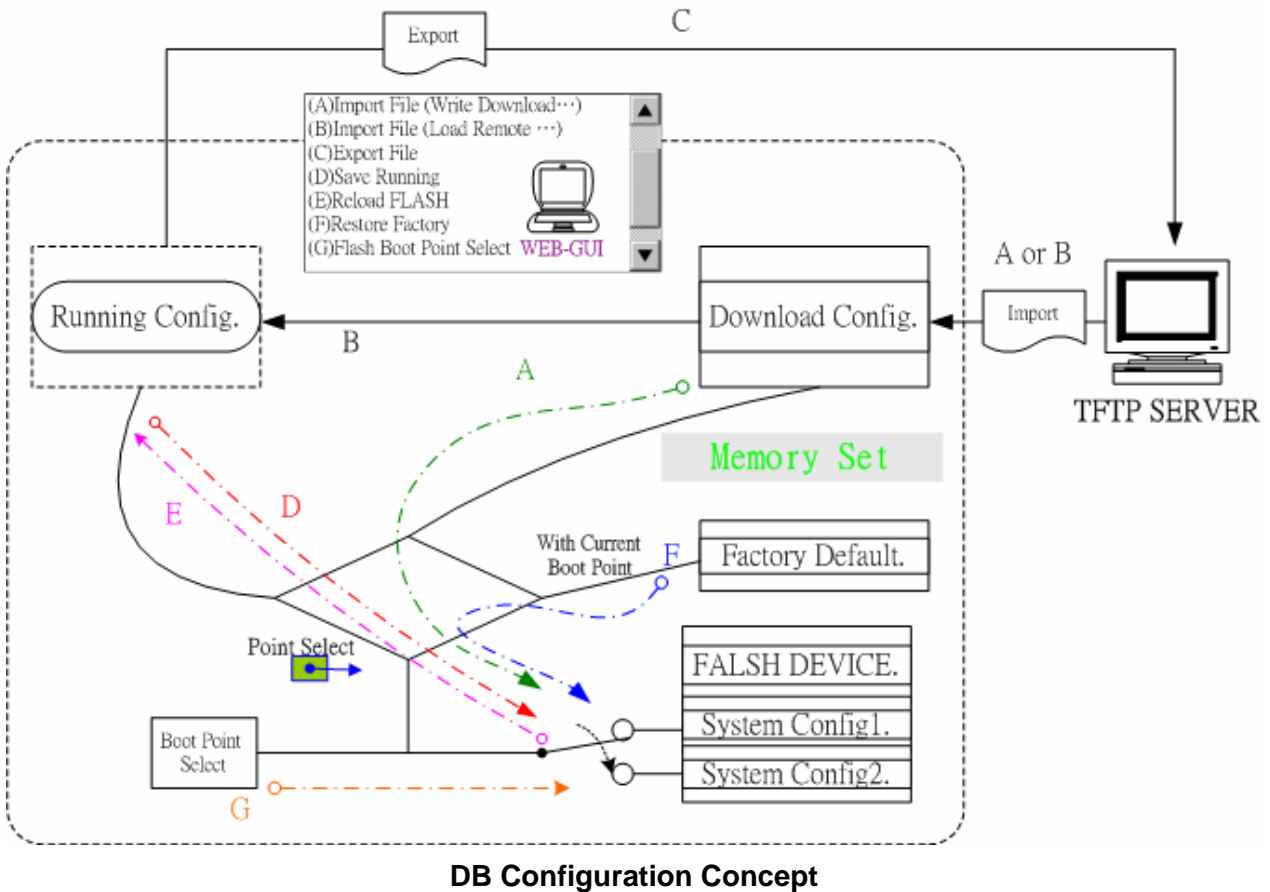
### Note:

Default Partition is **Partition1**.

### 2.3.3 How to backup / Restore the Configuration

#### Configuration Import / Export

The IDL-2402 provides the configuration preservation feature that the configuration database is stored in flash memory (two partitions available). In addition to the configuration preservation feature, the IDL-2402 also provides the configuration export/import feature.



#### For CLI:

Suppose that TFTP Server IP address is 172.16.100.181 and configuration file name is 'testcfg':

**(A)** Import file from TFTP Server to the Download Config and then write Download Config to the Flash (partition 1 or partition 2).

**Ex:**

```
enable
configure
remotecfg login 172.16.100.181 get testcfg write partition <number>
```



**(B)** Import file from TFTP Server to the Download Config and then load Download Config to the Running Config.

**Ex:**

```
enable
configure
remotecfg login 172.16.100.181 get testcfg load
```

**(C)** Export: export file from Running config to the TFTP server.

**Ex:**

```
enable
configure
runningcfg login 172.16.100.181 put testcfg
```

**(D)** Save Running config to the Flash (partition 1 or partition 2).

**Ex:**

```
enable
configure
runningcfg write partition <number>
```

**(E)** Reload Flash data to the Running config

**Ex:**

```
enable
configure
runningcfg load partition <number>
```

**(F)** Set system configuration (current boot point) to factory default value

**Ex:**

```
enable
configure
restore-factory
```

**(G)** Select Configuration Flash Boot Point

**Ex:**

```
enable
configure
runningcfg active partition <number>
```

**For Web:**

On the menu tree, click on **Maintenance** --- > **Database**. The *Database Configuration* page is displayed. Select the database configuration action you want to perform.

Database Configuration

DB Config Select: [Select]
(A)Import File (Write Download Config To FLASH)
(B)Import File (Load Remote Config to Running Config)
(C)Export File (Put Running Config To Remote TFTP Server)
(D)Save Running Config to Flash(System Config)
(E)Reload FLASH(System Config) to Running Config
(F)Restore Factory Default
(G)Flash Boot Point Configuration Select

**(A) Import File (Write Download Config To Flash):**

Type in the TFTP Server IP address and the name of the file you want to download. Then click on **Get File** button.

Database Configuration

DB Config Select: (A)Import File (Write Download Config To FLASH)
Write flash at: Partition2
TFTP Server IP: 172.16.10.241 File Name: config1 <input type="button" value="Get File"/>

**Write downloaded Config to Flash in progress:**

Database Configuration

DB Config Select: (A)Import File (Write Download Config To FLASH)
Write flash at: Partition2
TFTP Server IP: 172.16.10.241 File Name: config1 <input type="button" value="Get File"/>
<b>Action Name</b> WRITE_DOWNLOAD
<b>Action Status</b>   MEMORY WRITE IN PROGRESS

### Write to memory successfully:

#### Database Configuration

DB Config Select:	(A)Import File (Write Download Config To FLASH)	▼	
Write flash at:	Partition2	▼	
TFTP Server IP:	172.16.10.241	File Name: config1	Get File
<b>Action Name</b>	WRITE_DOWNLOAD		
<b>Action Status</b>	MEMORY WRITE SUCCESS		

### Fail to Get File:

DB Config Select:	(A)Import File (Write Download Config To FLASH)	▼	
Write flash at:	Partition2	▼	
TFTP Server IP:	172.16.10.28	File Name: config1	Get File
<b>Action Name</b>	GET_LOCAL		
<b>Action Status</b>	TFTP GET FAIL		

## (B) Import File (Load Remote Config to Running Config)

Type in the TFTP Server IP address and the name of the file you want to download. Then click on **Get File** button.

### Database Configuration

DB Config Select:	(B)Import File (Load Remote Config to Running Config)	
TFTP Server IP:	172.16.10.241	File Name: config1
		<input type="button" value="Get File"/>

## Load to Running Config successfully:

### Database Configuration

DB Config Select:	(B)Import File (Load Remote Config to Running Config)	
TFTP Server IP:	172.16.10.241	File Name: config1
		<input type="button" value="Get File"/>
<b>Action Name</b>	LOAD_REMOTE	
<b>Action Status</b>	MEMORY READ SUCCESS	

## Fail to Get File:

### Database Configuration

DB Config Select:	(B)Import File (Load Remote Config to Running Config)	
TFTP Server IP:	172.16.10.28	File Name: config1
		<input type="button" value="Get File"/>
<b>Action Name</b>	GET_LOCAL	
<b>Action Status</b>	TFTP GET FAIL	

### (C) Export File (Put Running Config to Remote TFTP Server)

Type in the TFTP Server IP address and the name of the file you want to export. Then click on **Put File** button.

#### Database Configuration

DB Config Select: (C)Export File (Put Running Config To Remote TFTP Server) ▼		
TFTP Server IP:	<input type="text" value="172.16.10.241"/>	File Name: <input type="text" value="config1"/>
		<input type="button" value="Put File"/>

### TFTP put file successfully:

#### Database Configuration

DB Config Select: (C)Export File (Put Running Config To Remote TFTP Server) ▼		
TFTP Server IP:	<input type="text" value="172.16.10.241"/>	File Name: <input type="text" value="config1"/>
		<input type="button" value="Put File"/>
<b>Action Name</b>	PUT_REMOTE	
<b>Action Status</b>	TFTP PUT SUCCESS	

### TFTP put file fail:

#### Database Configuration

DB Config Select: (C)Export File (Put Running Config To Remote TFTP Server) ▼		
TFTP Server IP:	<input type="text" value="172.16.10.28"/>	File Name: <input type="text" value="config1"/>
		<input type="button" value="Put File"/>
<b>Action Name</b>	PUT_REMOTE	
<b>Action Status</b>	TFTP PUT FAIL	

### (D) Save Running Config to Flash (System Config)

Click on the drop-down list and select partition, and then click on **Write\_Running** button to write running configuration to Flash.

Database Configuration

---

DB Config Select:	(D)Save Running Config to Flash(System Config)	
Write flash at:	Partition2	Write_Running

### Write running config to Flash successfully:

Database Configuration

---

DB Config Select:	(D)Save Running Config to Flash(System Config)	
Write flash at:	Partition2	Write_Running
<b>Action Name</b>	WRITE_RUNNING	
<b>Action Status</b>	MEMORY WRITE SUCCESS	

### (E) Reload Flash to Running Config

Click on the drop-down list and select partition, and then click on **LOAD\_FLASH** button to load configuration from Flash to Running Config.

#### Database Configuration

---

DB Config Select:	(E)Reload FLASH(System Config) to Running Config	▼	
Load flash at:	Partition2	▼	LOAD_FLASH

**Load configuration from Flash to Running Config successfully:**

#### Database Configuration

---

DB Config Select:	(E)Reload FLASH(System Config) to Running Config	▼	
Load flash at:	Partition2	▼	LOAD_FLASH
<b>Action Name</b>	LOAD_FLASH		
<b>Action Status</b>	MEMORY READ SUCCESS		

## (F) Restore Factory Default

Click on **Factory\_Default** button to restore factory default configuration.

Database Configuration

---

DB Config Select: (F)Restore Factory Default

After loading default configuration to Flash successfully, you must click on **RESTART** button to restart the system so that the configuration can take effect.

Database Configuration

---

DB Config Select: (F)Restore Factory Default

<b>Action Name</b>	RESTORE_FACTORY
<b>Action Status</b>	MEMORY WRITE SUCCESS

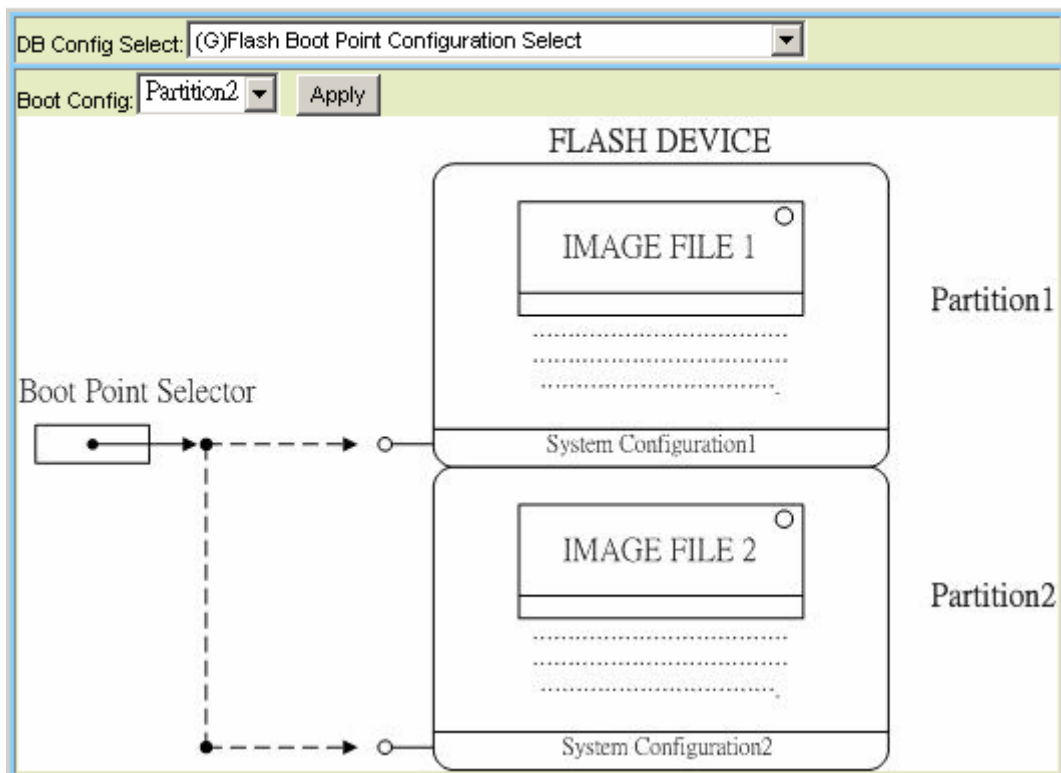
**Would you like to restart system?**



## (G) Flash Boot Point Configuration Select

Click on the *Boot Config* drop-down list and select the partition (Partition1 or Partition2) as the boot point. Click on **Apply** button and then restart the system. The system will restart and load the configuration in the partition you select into the running configuration.

### Database Configuration



### 2.3.4 Firmware Update

#### For CLI:

If you want to update firmware code, you must get image file from FTP Server. Suppose that FTP Server IP address is 172.16.10.219 and the image filename is 'vmlinux\_u2402\_ 1.00B05'.

#### Example:

1. Firmware update:

```
enable           //go to enable mode
configure       //go to configuration mode
firmware login 172.16.10.219 username share password tg123
firmware upgrade vmlinux_u2402_1.00B05
(Firmware upgrade may take a few minutes, don't turn off or reset the system
during the process. You can get status using command 'show firmware status' in
Enable execution mode.)

exit           //back to enable mode
show firmware status
(When status returns "Upgraded already!", you can restart the system to run
new firmware image. Once you upgrade successfully, you can't upgrade the
second time unless you have restarted the system.)
show firmware partition //show partition information
```

Current Version:1.00B05

Partition	Version	Date	Status
1	1.00B05	2007/07/05	--
2	1.00B05	2007/07/10	Active

(**Note:** the 'Active' status of the firmware partition information means the active partition for next time restart, not current running partition. You can see which partition is current running partition by referring to the Current Version. )

2. The IDL-2402 provides two firmware memory partitions. If you want to change the firmware partition for booting, use the following commands (if you change to the non-active partition, system will restart immediately):

```
enable           //go to enable mode
configure       //go to configuration mode
firmware partition <number> //select partition 1 or 2 for next power-on
```

**For Web:**

On the menu tree, click on **Maintenance** --- > **Firmware Update**. The *Firmware Update* page is displayed. Once you have entered all the necessary values, click on **Firmware Update** button to start updating the firmware.

Firmware Update			
Remote FTP Server IP	172 . 16 . 10 . 219 ; 21		
Server User Name	[ share ]		
Server Password	[ **** ]		
File Name	[ vmlinux_u2402_1.00B0 ]		
Firmware Update Status	No Action[0]		
Firmware Partition Select:	Partition 2		
Once system has 2 versions, an operator can use Partition Select from 1 to 2, vice versa. (e.g)Partition changes from version A.a to version B.b			
Partition Location	Version	Build Date	Status
Partition:1	1.00B05	2008/6/18	----
Partition:2	1.00B05	2008/8/29	Active
Current Version	1.00B05		
1.[Warning]Upgrading firmware may take a few minutes, please don't turn off or reset the system.			
2.Once the system has upgraded already, please restart it!			

Label	Description
Firmware Update	Once you have typed in the parameter values, click on this button to start firmware update.
Remote FTP Server IP	Type in the IP address of the FTP server.
Server User Name	Type in the ftp user name.
Server Password	Type in the ftp password.
File Name	Type in the firmware filename.
Firmware Update Status	This field shows current status of firmware update process.
Firmware Partition Select	Select firmware memory partition (Partition 1 or 2). If you change to the other partition (not current partition), the system will restart immediately.

Partition Information	This section displays the partition information including firmware version, updating date, and status (active or not). Note that active partition means the partition for next power-up, not current partition in use. You can refer to <b>Current Version</b> to know which partition is the current partition in use. When you update the firmware, new firmware will be written to the partition that is not currently in use.
-----------------------	---

**FTP Get in progress:**

The following message is displayed during getting file from FTP server.

```
incoming cluster id 0
FTP SERVER IP=172.16.10.219
Waiting for FTP Session (about 30 sec..)
```

**Firmware Write in progress:**

The Flash Write process may take a few minutes; **you must not turn off or reset the system during the process.**

Current Service	share@172.16.10.219, vmlinux u2402 1.00B05
Firmware Update Status - FLASH WRITE IN PROGRESS -	
1.[Warning]Upgrading firmware may take a few minutes, please don't turn off or reset the system.	
2.Once the system has upgraded already, please restart it!	

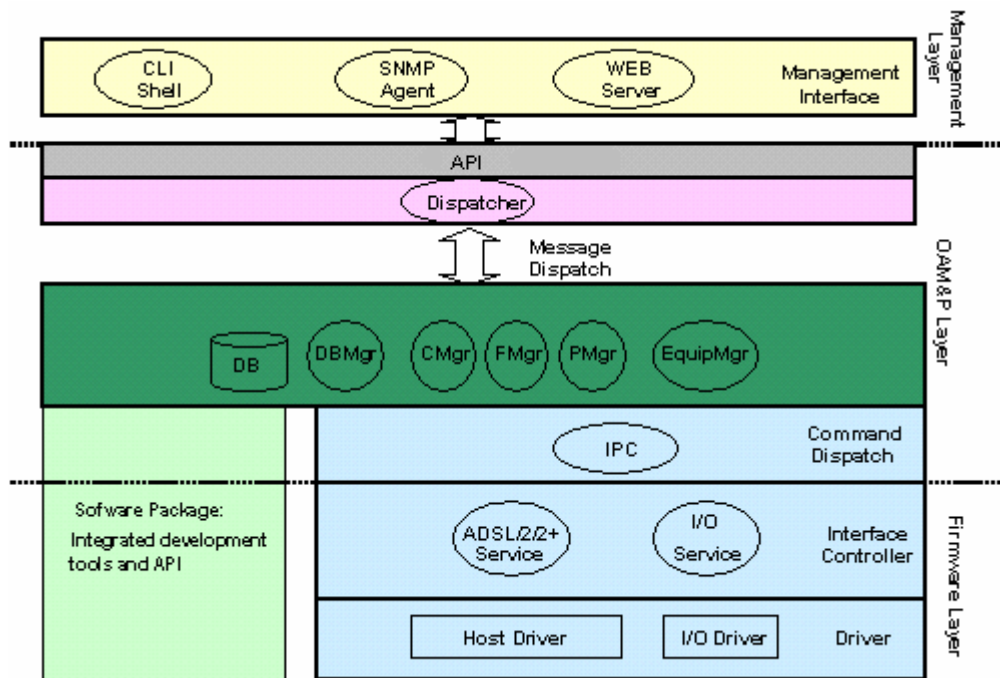
**Firmware Write successfully:**

When the Flash Write process has completed successfully, the Firmware Update Status shows "Firmware has upgraded already". You can now restart the system.

# 3. Software Introduction

## 3.1 General Overview

The software architecture of the IDL-2402 is shown in the figure below. It can be divided into three layers: the management layer, the OAM&P layer, and the firmware layer.



**Figure 3-1 Management Software Model**

As in the figure, CLI shell, SNMP agent, and WEB server are in the top-most layer (management layer) of the system software and offering OAM&P function of the DSLAM based on the conceptual management features as follows:

- **Configuration Management**
- **Performance Management**
- **Fault Management**

The IDL-2402 uses flash memory as the database (DB) to store system configuration parameters. The firmware layer includes ADSL drivers, Memory and I/O control, etc.

### 3.1.1 Features of Management Interface

- Support CLI, SNMP (v1, v2c), and web-based GUI management interface through in-band channels
- Support up to 10 CLI sessions at the same time
- The in-band management connection of the system is the highest priority of all supported in-band traffic categories
- Support Telnet interface for remote operators to login system operating console
- Support up to 32 configurable SNMP trap destinations and allow the SNMP traps to be sent to any specified SNMP aware device, for instance, Network management center

## 3.2 Configuration Management

---

The configuration management contains the following aspects:

1. System Setup, such as setup for management IP address/net mask, GBE interface (including to enable/disable and query the administrative/operational status of the trunk port), line port (including to enable/disable/reset ADSL port, query the administrative/operational status of the port, and bind profiles on a per port basis), CLI session and timeout, Cluster, SNTP, IP routes, and user administration (including login authorization and provides three security levels).
2. Bridge Configuration (see “3.2.1 Bridge Configuration” below for more description)
3. ADSL Configuration (see “

4. 3.2.2 ADSL Configuration” below for more description)
5. ATM traffic management
6. SNMP setup

The configuration management provides detecting and reporting to the operators through SNMP Trap for all memory updates reflecting changes in the system configuration. It also provides logging the changes in the operational state and making this information available (on-demand) to the operators over the operation interface.

The system contains a database (DB) to store all the provisioning data so that the configuration can be restored in re-booting. Authorized operators can query the DB to obtain configuration data.

### **3.2.1 Bridge Configuration**

The bridge configuration of the IDL-2402 includes the following aspects:

- Interface setup
- VLAN configuration: static VLAN, protocol based VLAN, VLAN translation, and IP/MAC anti-spoofing.
- Access Control: Filtering, VLAN priority remark, rate limit, and priority queue mapping.
- Forwarding database
- DSL Line Identify
- IGMP configuration
- IPoA configuration



### 3.2.2 ADSL Configuration

Configuration for an ADSLx user port is provisioned by the parameter set, which is a group of attributes that determine the user port behaviors; and we call it as a profile. The IDL-2402 provides a profile-based provisioning per the definition of ITUT G997.1 and RFC 2662 for ADSL line configuration data and a mechanism to associate the ADSL port to these profiles. One or more ADSL lines may be configured to share parameters of a single profile.

The ADSL profiles of IDL-2402 include:

- **Service Profile**

The parameters include Rate adaptive mode selection, Min/max/planned bit rate, Interleaving Max delay, and Minimum impulse noise protection.

- **Spectrum Profile**

The parameters include the Power management setting, Min/max/target noise margin, allowed ADSL modes of operation, Carrier mask, RFI band data, Maximum nominal aggregate transmit power, Maximum PSD level, PSD shape (for ADSL2+), Power back off initiation, and Maximum aggregate receive power.

- **TCA Profile**

The parameters include ESs, SESs, UASs for interval and day PM, and LOS, LOF, LOPWR, LOL, Error Frame for interval PM only.

The system provides up to 120 Service profiles and Spectrum profiles respectively, and provides up to 16 TCA profiles. One of the profiles is a fix default that cannot be modified; users are allowed to create, and edit the other profiles. Each profile contains a parameter set for downstream and upstream direction respectively. Users can also observe the actual values of these parameters through CLI, Web-GUI, or EMS.

The ADSL configuration also includes the function for user to query the line status, the physical layer status, and the channel interface status for ATU-C and ATU-R. The status information includes the attenuation rate, actual net data rate, the line attenuation, SNR margin, transmission power, actual interleaving delay, channel characteristics per subcarrier, quiet line noise PSD, ...etc.

### 3.3 Performance management

---

Performance management supports performance monitoring by collecting and thresholding performance parameter counters against 15-minute intervals for each interface and module respectively. Users can query the data of these parameters through CLI and Web-GUI.

Performance statistics include the following:

**1. Statistics for current interval:**

A real-time aspect contains the reflection of the current value situation before the new interval. The current value includes values of current 15-min interval and current 1-day interval.

**2. Statistics history at 15-minute basis:**

The system stores previous 96 statistics of PM parameters at 15-min interval for retrieving.

**3. Statistics history at 1-day basis:**

The system stores previous 1 statistics of PM parameters at 1-day interval for retrieving.

Most of the performance parameter thresholds are user-programmable. The IDL-2402 uses a threshold crossing alert (TCA) to notify the management system when one of the counts during a measurement interval exceeds its threshold.

The TCA contains the following information:

- Specific interface involved
- Error condition identifying the measurement type
- Value of the parameter
- Occurrence date and time of the event

The performance management also provides the traffic counter including transmitted packets, error packets and discarded packets for each interface (network and subscriber interface) and ATM cell counter in both transmit and receive direction. Users can observe these data through CLI and Web-GUI.

#### ADSL PM

The IDL-2402 provides the following ADSL PM statistics:

Item	Description
ATUC_LOS	Loss of signal count
ATUC_LOF	Loss of frame count
ATUC_LOM	Loss of margin count
ATUC_LOL	Loss of link count
ATUC_ES	Errored Seconds
ATUC_SES	Severely Errored Seconds
ATUC_UAS	Unavailable Seconds
ATUC_ReInitCounter	The number of times the modem left showtime and tried to re-initialize the line because of detection of a persistent defect
ATUC_FailedInitCounter	The number of times the modem tries to initialize the line but fails.

ATUC_CU	User Total Cell Count
ATUC_CD	Delineated Total Cell Count
ATUC_HEC	ATM Header Error Count
ATUC_IBE	Idle Cell Bit Error Count
ATUC_CVS	The counter associated with the number of Coding Violations encountered by the channel.
ATUC_FECCS	The counter associated with the number of corrected codewords encountered by the channel.
ATUR_LOS	Far End Loss of signal count
ATUR_LOF	Far End Loss of frame count
ATUR_LOM	Far End Loss of margin count
ATUR_LPR	Far End Loss of power count
ATUR_ES	Far End Errored Seconds
ATUR_SES	Far End Severely Errored Seconds
ATUR_UAS	Far End Unavailable Seconds
ATUR_HEC	Far End ATM Header Error Count
ATUR_IBE	Far End Idle Cell Bit Error Count
ATUR_CVS	The far end counter associated with the number of Coding Violations encountered by the channel.
ATUR_FECCS	The far end counter associated with the number of corrected code words encountered by the channel.

The IDL-2402 provides the following ADSL PM thresholds:

<b>NE threshold</b>	<b>FE threshold</b>
15min ES threshold	15min ES threshold
15min SES threshold	15min SES threshold
15min UAS threshold	15min UAS threshold
15min LOS threshold	15min LOS threshold
15min LOF threshold	Not support
Not support	15min LOPWR threshold
15min LOL threshold	Not support
15min ErrFrm threshold	15min ErrFrm threshold
24hour ES threshold	24hour ES threshold
24hour SES threshold	24hour SES threshold
24hour UAS threshold	24hour UAS threshold

### 3.3.1 RMON Feature

The IDL-2402 supports performance statistics defined in RMON MIB groups 1 (Ethernet statistics), 2 (history control), 3 (Ethernet history), 4 (alarm), 5 (event), and 6 (log) per RFC 2819 for all network uplink 10/100/1000 ports. The supported parameters are as follows:

**Table 3-1 RMON ETH Statistics variables**

Variable	Description
Rx DropEvents	Monitoring rx dropped packets
Rx Bytes	Monitoring rx bytes packets
Rx Packet	Monitoring rx packets
Rx BroadcastPkts	Monitoring rx broadcast packets
Rx MulticastPkts	Monitoring rx multicast packets
Rx CRC Align Errors	Monitoring rx error alignment packets
Rx Undersize Pkts	Monitoring rx undersize packets
Rx Oversize Pkts	Monitoring rx oversize packets
Rx Fragments	Monitoring rx fragments packets
Rx Jabbers	Monitoring rx jabber packets
Tx Collisions	Monitoring tx single collision packets
Tx/Rx Pkts 64bytes	Monitoring tx/rx 64 bytes
Tx/Rx Pkts 65~127bytes	Monitoring tx/rx 65 to 127 bytes
Tx/Rx Pkts 128~255bytes	Monitoring tx/rx 128 to 255 bytes
Tx/Rx Pkts 256~511bytes	Monitoring tx/rx 256 to 511 bytes
Tx/Rx Pkts 512~1023bytes	Monitoring tx/rx 512 to 1023 bytes
Tx/Rx Pkts 1024~1518bytes	Monitoring tx/rx 1024 to 1518 bytes
Tx Bytes	Monitoring tx bytes packets
Tx Packet	Monitoring tx packets
Tx MulticastPkts	Monitoring tx multicast packets
Tx BroadcastPkts	Monitoring tx broadcast packets

**Table 3-2 RMON ETH History Control variables**

Variable	Description
HistoryDropEvents	Monitoring rx dropped packets
Historybytes	Monitoring rx bytes packets
HistoryPackets	Monitoring rx packets
HistoryBroadcastPkts	Monitoring rx broadcast packets
HistoryMulticastPkts	Monitoring rx multicast packets
HistoryCRCAAlignErrors	Monitoring rx error alignment packets

HistoryUndersizePkts	Monitoring rx undersize packets
HistoryOversizePkts	Monitoring rx oversize packets
HistoryFragments	Monitoring rx fragments packets
HistoryJabbers	Monitoring rx jabber packets
HistoryCollisions	Monitoring tx single collision packets
HistoryTxBytes	Monitoring tx bytes
HistoryTxPackets	Monitoring tx packets
HistoryTxMulticast	Monitoring tx multicast
HistoryTxBroadcast	Monitoring tx broadcast
HistoryUtilization	Monitoring tx Utilization

### 3.4 Fault Management

Fault management is conceptually partitioned into two levels: the system top level, and interface-specific level. Both levels are alarm-level configurable and can be Major and Minor. All the alarms are mask-able.

Fault management provides the alarm output through hardware output interface (on the system front panel) and visible indicator (LED). The alarm/status indications are automatically generated as a result of certain events/conditions. The IDL-2402 supports query of all current alarm status. It is also able to keep 256 records of historical alarms and events respectively.

The IDL-2402 provides the ability to group alarms in a hierarchical alarm presentation scheme. Alarms of the same rank can exist at the same time. A lower-ranking alarm will be demoted if a higher-ranking alarm is raised for the same object. For example, if a far-end LOS is raised on a circuit and then a far-end LPR is raised on the circuit, the LPR alarm stands and the LOS closes. The alarm hierarchy used in the IDL-2402 system is shown in the following table:

**Table 3-3 IDL-2402 Alarm Hierarchy**

Priority	Alarm Type
Highest	all activation failures (ADSL_COMMF_FE or ADSL_NOPEER_FE)
—	far-end LPR
—	near-end LOS or far-end LOS
Lowest	near-end LOF or far-end LOF (near-end and far-end are independent; for example, FE-LOS does not restrain NE-LOF)

**Note:** 1.LOM, LCD, and NCD are not included in the alarm hierarchy; they're treated independently.  
2.The PM counters LPR, LOS, and LOF follow the alarm hierarchy rule. When these alarms exist at the same time, only the PM counter of a higher-ranking alarm will count (the PM counters of other lower-ranking alarms will not).

#### System Alarms

The IDL-2402 provides the following System alarms:

- Fan Failure Alarm
- Above Temperature
- Below Temperature
- Self-test Fail
- DSP Fail - you can see which DSP chip is fail from the user interface (Web GUI, CLI, etc.). There is a number 1 ~ 4 in the alarm message/description corresponding to the DSP chip 1 ~ chip 4

## **ADSL Alarms**

The IDL-2402 provides the following ADSL alarms:

- LOS (Loss of Signal) -Near End/Far End
- LOF (Loss of Frame) -Near End/Far End
- LOM (Loss of Margin) -Near End/Far End
- LCD (Loss of Cell Delineation) -Near End/Far End
- NCD (No Cell Delineation) -Near End/Far End
- LOPWR (Loss of Power) -Far End
- COMMF: Unable to communicate with peer modem -Far End
- NOPEER: No peer present – Far End

### 3.5 Loopback Testing

---

The IDL-2402 supports ATM and ADSL loop diagnostics.

**ATM:**

The system provides F5 end-to-end or segment loopback.

**ADSL:**

The system provides Dual Ended Loop Testing (DELT) for each ADSL line on a per port basis, according to the definition per section 8.12.3 of ITUT G992.3.

The following test parameters are supported:

- Channel Characteristics Function  $H(f)$  per subcarrier (CCF-ps),
- Quiet Line Noise PSD  $QLN(f)$  per subcarrier (QLN-ps),
- Signal-to-Noise Ratio  $SNR(f)$  per subcarrier (SNR-ps),
- Line Attenuation (LATN),
- Signal Attenuation (SATN),
- Signal-to-Noise Ratio Margin (SNRM),
- Attainable Net Data Rate (ATTNDR),
- Far-end Actual Aggregate Transmit Power (ACTATP),
- Near-End Actual Aggregate Transmit Power (ACTATP).



### 3.6 Cluster Feature

The IDL-2402 supports Cluster feature that can make a group of NEs (network elements) work together as a single NE from the management point of view. Operators can manage the NEs in a cluster, called cluster nodes, via the same single IP address in terms of CLI, Web-based GUI or SNMP based management interfaces. The IDL-2402 currently provides cluster feature that a cluster can include up to four cluster members (NEs). There are one Master and the other members are all Slaves in a cluster. The Master works as a gateway of the Slaves, and it also can forward CLI/Web/SNMP commands to the destination Slave. The Slaves can execute the commands and respond to the Master. It uses star topology for conducting a Clustering Management group.

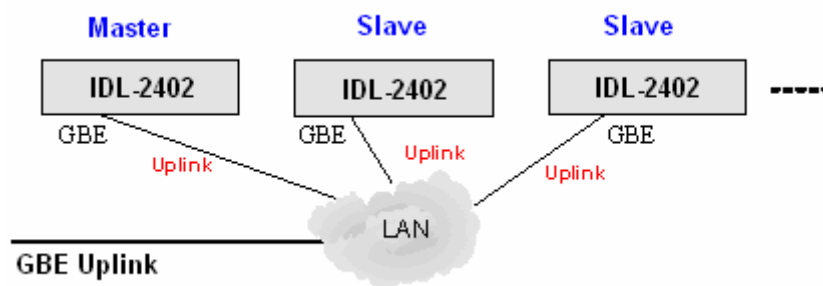


Figure 3-2 Cluster network topology – Star

Before you group a Master and a Slave IPDSLAM, some parameters need to be well configured:

1. **Cluster domain name:** The group name for a cluster must be the same on Master and Slave.
2. **Cluster IP address:** IP address to be used for remote management when Master and Slave are grouped together.
3. **NE cluster name:** A name to identify Master or Slave.
4. Set private IP address on in-band port for both Master and Slave IPDSLAM. The private IP is used for communication between Master and Slave. The management center actually uses Cluster IP address for remote management.
5. Master and Slave need to be configured with same management VLAN.
6. The default gateway should be configured to the router that is aware how to route management traffic to Management Center of the management network. The setting of Cluster default gateway should be the same between Master and Slave.

## 4. WEB Management

### Web Configuration Tool Overview

To access Web Configuration Tool on an IDL-2402:

1. Connect a PC to the console port of the DSLAM. At the console, type the following CLI command:

**WDS:>enable** /\*enter the enable command mode from initial mode\*/

**WDS:%show management all** /\*display all in-band management IP setting\*/

The default LAN IP address is got via DHCP.

2. At your web browser, enter the URL you retrieve by using the above command. If you need to change the accessing port number (default is 80) of the Web Configuration Tool, use the following CLI command (with the correct values added):

**WDS:%configure** /\*enter the configuration command mode from enable mode\*/

**WDS:(conf)#http port <number>** /\*set http port number\*/

3. Logging in to Web Configuration Tool:

Once you connect to the DSLAM, a login page is displayed. You must enter your username and password to access the pages. The default login username and password are as follows:

User Name: **admin**

Password: **admin**

Click on the **Sign in** button.

You are now ready to configure your DSLAM using the Web Configuration Tool.

Web Interface Login

Username:

Password:

- Level 1: SuperUser, R/W Management all
- Level 2: Engineer, R/W (Disabled from User Account)
- Level 3: Guest, Read only

**Figure 4-1** Web Configuration Tool login page

4. The following page is displayed. This is the homepage of the Web Configuration Tool.

The screenshot displays the Web Configuration Tool homepage. On the left is a blue sidebar with a navigation menu containing: System, 802.1x Security, Bridge, ADSL, Traffic, SNMP, and Maintenance. At the top of the sidebar are a dropdown menu for 'Cluster-Main Unit' and a 'Refresh' button. The main content area is titled 'System Information' and is divided into three sections: 'ACCESS LOGIN', 'SYSTEM VERSION', and 'GIGA STATUS'. Each section contains a table of system parameters.

ACCESS LOGIN				
Access Level	System Date	FW Boot	Active DB	Current DB
Super user	2008/09/09	Partition-1	Partition-1	Partition-1

SYSTEM VERSION				
Hardware	Firmware	Software	Web	Circuit:1~24
C	1.00B05	1.00B05	Mx-06.17b	AnnexA

GIGA STATUS				
Gigal	SYS LED	ALM LED	Bridge MAC	Gigal MAC
Config Enabled	●	●	00:30:4F:71:99:0A	00:30:4F:71:99:09

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Figure 4-2 Web Configuration Tool homepage

## About Web Configuration Tool Pages

The Web Configuration Tool provides a series of web pages for users to setup and configure the IDL-2402 System. These pages are organized into six main topics including **System**, **Bridge**, **ADSL**, **Traffic**, **SNMP**, and **Maintenance**. You can select each topic from the menu on the left-hand side of the main window. Table 4-1 lists the various pages of the web configuration tool.

The exact information displayed on each web page depends on the specific configuration that an operator is using. The following chapters provide a general description of the setup and configuration details.

**Table 4-1 Pages of the Web Configuration Tool**

<b>System</b>	<i>System Information</i>	
	<i>Board IP Setup</i>	
	<i>Ethernet Port Service</i>	
	<i>ADSL Port Service</i>	
	<i>CLI Setup</i>	
	<i>Cluster Setup</i>	
	<i>System Inventory</i>	
	<i>SNTP</i>	
	<i>IP Routes</i>	
	<i>User Administration</i>	
	<i>Duplicator</i>	
<b>802.1x Security</b>	<i>System Protocol</i>	
	<i>RADIUS &amp; Local Profile</i>	
<b>Bridge</b>	Interface Setup	<i>GIGA Bridge</i>
		<i>ADSL PVC</i>
		<i>ADSL Bridge</i>
		<i>ADSL Port Security</i>
	VLAN Configuration	<i>Static VLAN</i>
		<i>Protocol Based VLAN</i>
		<i>Translation VLAN</i>
		<i>Static Allowed IP</i>
		<i>MAC Spoofing</i>
	Access Control	<i>Filtering</i>
		<i>VLAN Priority Remark</i>
		<i>Rate Limit</i>
		<i>Priority Queue Mapping</i>
	Forwarding	<i>TP Forwarding DB</i>
		<i>Forwarding Static</i>

	Relay	<i>DSL Line Identify</i>	
	IGMP	<i>Protocol &amp; Route Port</i>	
		<i>IGMP Profile</i>	
		<i>IGMP Multicast</i>	
	IPOA	<i>BRAS MAC</i>	
<i>Interface Setup</i>			
<b>ADSL</b>	Profile	<i>Service Profile (main)</i>	
		<i>Service Profile (Channel)</i>	
		<i>Spectrum Profile (main)</i>	
		<i>Spectrum Profile (ADSLx)</i>	
		<i>TCA Profile</i>	
	Data & Inventory	<i>Inventory</i>	
		<i>Loop Test</i>	
		<i>Carrier Data</i>	
		<i>OP Data</i>	
	Line Config & Info	<i>Line Configuration</i>	
		<i>Line Information</i>	
	<b>Traffic</b>	<i>ATM Traffic Descriptor</i>	
	<b>SNMP</b>	<i>SNMP Community</i>	
<i>SNMP Target</i>			
<i>SNMP Notify</i>			
<b>Maintenance</b>	<i>SYS Log Server</i>		
	<i>Database</i>		
	<i>Firmware Update</i>		
	<i>ATM Loopbacks</i>		
	Fault Management	<i>Alarm/Event</i>	
		<i>Alarm Profile</i>	
		<i>Hardware Temp.</i>	
	Performance Monitoring	<i>System Utilization</i>	
		<i>Ethernet Statistics</i>	
		<i>ATM Statistics</i>	
		<i>RMON</i>	
<i>ADSL Day/Interval</i>			

## 4.1 System

### 4.1.1 System Information

The *System Information* page (the default page you'll see after you login the web configuration tool) contains information about the user access level, current system date and time, current boot configuration partition, system MAC address, system HW/SW/FW version, web configuration software version, supported subscriber line type (AnnexA or AnnexB), GBE interface status, and LED status (SYS and ALM).

From the *System* menu, click on *System Info*. The following page is displayed:

Cluster-Main Unit Refresh

- System
- 802.1x Security
- Bridge
- ADSL
- Traffic
- SNMP
- Maintenance

### System Information

#### ACCESS LOGIN

Access Level	System Date	FW Boot	Active DB	Current DB
Super user	2008/09/09	Partition-1	Partition-1	Partition-1

#### SYSTEM VERSION

Hardware	Firmware	Software	Web	Circuit:1~24
C	1.00B05	1.00B05	Mx-06.17b	AnnexA

#### GIGA STATUS

Giga1	SYS LED	ALM LED	Bridge MAC	Giga1 MAC
Config Enabled	●	●	00:30:4F:71:99:0A	00:30:4F:71:99:09

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### System Information Page

### 4.1.2 Board IP Setup

This option allows you to configure the in band IP address setting, VID management setting, HTTP port setting, etc. From the *System* menu, click on *Board IP Setup*. The following page is displayed:

Board IP Setup

Modify		RESTART	
<b>Inband Address</b>			
<b>IP Address</b>	192 . 168 . 100 . 1	<b>Subnet Mask</b>	255 . 255 . 255 . 0
<b>Inband VID Management</b>			
<b>NO Limit VID</b>	<input checked="" type="checkbox"/>	<b>Limit VID</b>	<input type="text"/>
			Priority 0 ▾
<b>HTTP Port</b>	<b>Remote IP</b>	<b>System Name</b>	
80	192.168.8.193	u13726b	
[ <a href="#">System Inventory</a> ]			
Modify the configuration may cause the connection loss			

**Board IP Setup Table**

Label		Description
<b>In Band Address</b>	IP Address	Type in the IP address of the DSLAM for in-band management.
	Subnet Mask	Type in the in-band subnet mask of the DSLAM.
<b>Inband VID Management</b>	No Limit VID	Select this checkbox if no specific in-band management VLAN is required, and the setting in "Limit VID" parameter will be ignored.
	Limit VID	The VLAN ID for individual in-band management VLAN.
	Priority	Select the VLAN priority level (0~7) of the in-band management traffic sent out from GBE port.
<b>HTTP Port</b>		Shows current HTTP port setting for Web access. You can modify http port setting in this field.
<b>Remote IP</b>		Shows the IP address of the management PC currently connected to this DLSAM.
<b>System Name</b>		You can modify the name of the system here.
<b>Modify</b>		Click on this button to submit the modification.
<b>RESTART</b>		Click on this button to restart the system.

### 4.1.3 Ethernet Port Service

This option allows you to set the administration state and select the speed mode for the Gigabit Ethernet ports. From the *System* menu, click on *Ethernet Port Service*. The following page is displayed:

#### Ethernet Port Setup

<input type="button" value="Modify"/>					
Port	Admin Status	Selected Speed	Link Status	Current Speed	Current Media
1	Admin ON ▾	AutoNegotiate ▾	OFF	down	N/A
[ <a href="#">System Inventory</a> ]					

#### Ethernet Port Service Setup

Label	Description
<b>Port</b>	This field shows port number of the Gigabit Ethernet interface.
<b>Admin Status</b>	Click on the drop-down list and select the administrative state (ON/OFF) to enable/disable the GBE port.
<b>Selected Speed</b>	Click on the drop-down list and select the speed mode for trunk GBE port. Supported options are: AutoNegotiate, 100Mbps Half (duplex), 100Mbps Full (duplex).
<b>Link Status</b>	Show operational status of the trunk ports (ON/OFF).
<b>Current Speed</b>	Show current speed mode of the trunk ports.
<b>Current Media</b>	Show current uplink transmission medium (via copper or SFP). This field will show N/A when Oper Status is OFF.
<b>Modify</b>	Click on this button to submit the modification.



#### 4.1.4 ADSL Port Service

This option allows you to setup the service status of the line ports and to bind the selected service profiles and spectrum profiles. Also, you can query current setting and the operational status of the line ports. From the *System* menu, click on *ADSL Port Service*. The following page is displayed:

First click on the drop-down list to select the port range to be displayed. Remember to click on the radio button to select a port to be modified (or select the **All** checkbox to modify all ports of the page at a time).

ADSL Circuit Service

---

Admin  Service Profile  Spectrum Profile  TCA Profile  All

The Service Profile range from 1 to 120  
 The Spectrum Profile range from 1 to 120  
 The TCA Profile range from 1 to 64

Port 01~12

Select	Port	Admin Status	Current Status	Service Profile	Spectrum Profile	TCA Profile
<input checked="" type="radio"/>	1	ON	ON	1	1	1
<input type="radio"/>	2	OFF	OFF	1	1	1
<input type="radio"/>	3	OFF	OFF	1	1	1
<input type="radio"/>	4	OFF	OFF	1	1	1
<input type="radio"/>	5	OFF	OFF	1	1	1
<input type="radio"/>	6	OFF	OFF	1	1	1
<input type="radio"/>	7	OFF	OFF	1	1	1
<input type="radio"/>	8	OFF	OFF	1	1	1
<input type="radio"/>	9	OFF	OFF	1	1	1
<input type="radio"/>	10	OFF	OFF	1	1	1
<input type="radio"/>	11	OFF	OFF	1	1	1
<input type="radio"/>	12	OFF	OFF	1	1	1

[ [SERVICE PROFILE](#) | [SPECTRUM PROFILE](#) | [TCA PROFILE](#) ]

**Table 0-1 ADSL Circuit Setup**

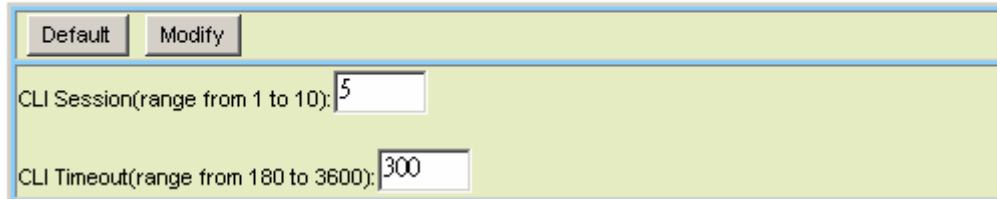
Label	Description
<b>Admin</b>	Click on the drop-down list and select the Administrative status: ON, OFF, or RESET.
<b>Service Profile</b>	Type in the index of the Service Profile (1~120).
<b>Spectrum Profile</b>	Type in the index of the Spectrum Profile (1~120).

<b>TCA Profile</b>	Type in the index of the TCA Profile (1~64).
<b>All</b>	Select the check box to select all circuits of current page.
<b>Modify</b>	Click on this button to submit the modification.
<b>Query</b>	Click on this button to get most recent status of the circuits.
<b>Select</b>	Click on the radio button to select the port to be modified.
<b>Current Status</b>	This field shows the operational status of the line ports. Possible values are ON (enabled), OFF (disabled), and Testing (in loop testing now).

### 4.1.5 CLI Setup

This option allows you to modify the timeout setting for a CLI session and the allowable number of CLI sessions. From the *System* menu, click on *CLI Setup*.

#### CLI Setup



#### CLI Setup

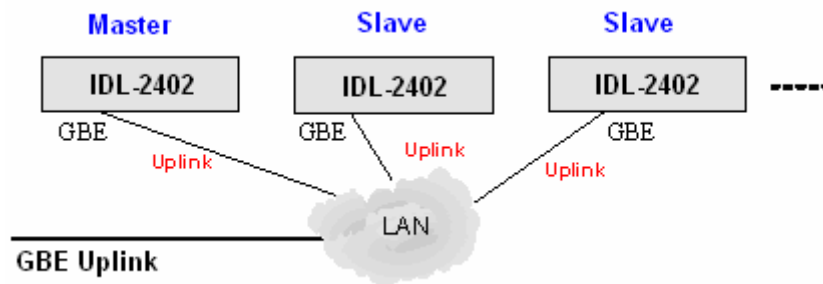
Label	Description
CLI Session	Allowable number of CLI sessions at the same time. Valid value: 1~10.
CLI Timeout	CLI session will be closed once the idle time exceeds this timeout value. Valid value: 180~3600 (sec).
Default	Click on this button to set default values (CLI session: 5, CLI timeout: 300 sec).
Modify	Click on this button to submit the modification.

## 4.1.6 Cluster Setup

This option allows you to setup Cluster function, which can make a group of NEs (network elements) work together as a single NE from the management point of view. Before you group a Master and a Slave IPDSLAM, some parameters need to be well configured:

1. **Cluster domain name:** The group name for a cluster must be the same on Master and Slave.
2. **Cluster IP address:** IP address to be used for remote management when Master and Slave are grouped together.
3. **NE cluster name:** A name to identify Master or Slave.
4. Set private IP address on in-band port for both Master and Slave IPDSLAM. The private IP is used for communication between Master and Slave. The management center actually uses Cluster IP address for remote management.
5. Master and Slave need to be configured with same management VLAN.
6. The default gateway should be configured to the router that is aware how to route management traffic to Management Center of the management network. The setting of Cluster default gateway should be the same between Master and Slave.

Currently a IDL-2402 cluster can support up to **four** cluster members (NEs). The IPDSLAMs in a cluster must all be in-band connected through the GBE port. It uses star topology for conducting a Clustering Management group.



**Cluster network topology – Star**

From the *System* menu, click on *Cluster Setup*. The following page is displayed:

### Cluster Setup

Cluster Configuration			
<input type="button" value="Modify"/>		<input type="button" value="Query"/>	
<b>State</b>	IDLE		
<b>Name</b>	NE2	<b>IP</b>	172 . 16 . 77 . 88
<b>Domain</b>	dvt	<b>Netmask</b>	255 . 255 . 255 . 0
<b>Role</b>	Individual	<b>Gateway</b>	172 . 16 . 77 . 177
<b>Voting key</b>	0		

By default, the DSLAM is not in a cluster. The state of the Cluster Configuration shows “IDLE” and the Role shows “Individual”.

To make the DSLAM join a cluster, select the Role as “Cluster” or “Slave only” according to your plan and then click on Modify. The state of the Cluster Configuration will show from **DISCOVERING** to **VOTING** to **MASTER** or **SLAVE** at last.

### Cluster Setup

Cluster Configuration				
<input type="button" value="Modify"/> <input type="button" value="Query"/>				
<b>State</b>	DISCOVERING			
<b>Name</b>	NE2	<b>IP</b>	172 . 16 . 77 . 88	
<b>Domain</b>	dvt	<b>Netmask</b>	255 . 255 . 255 . 0	
<b>Role</b>	Cluster	<b>Gateway</b>	172 . 16 . 77 . 177	
<b>Voting key</b>	0			

The following figure shows the Cluster Setup page of a cluster containing two cluster members. You will see the following page if you’re connecting directly to the Master via its in-band IP address or connecting to the Cluster IP “172.16.77.88”. You can control all the IP DSLAMs in a cluster by connecting to the Cluster IP address, or by directly connecting to the Master IPDSLAM via its in-band IP address that is configured in the *Board IP Setup* page (refer to section 4.1.2).

### Cluster Setup

Cluster Configuration				
<input type="button" value="Modify"/> <input type="button" value="Query"/>				
<b>State</b>	MASTER			
<b>Name</b>	NE1	<b>IP</b>	172 . 16 . 77 . 88	
<b>Domain</b>	dvt	<b>Netmask</b>	255 . 255 . 255 . 0	
<b>Role</b>	Cluster	<b>Gateway</b>	172 . 16 . 77 . 177	
<b>Voting key</b>	0			
<b>ID</b>	<b>IP</b>	<b>Role</b>	<b>Name</b>	<b>Domain</b>
1	20.20.20.1	Master	NE1	dvt
2	20.20.20.2	Slave	NE2	dvt

### Cluster Setup

Label	Description
<b>Name</b>	Type in the NE name in the cluster.
<b>Domain</b>	Type in the name of the cluster domain.
<b>Role</b>	Valid options are: Cluster (Master or Slave is decided by the system), Slave only (role of the DLSAM is always Slave), and Individual (not in a cluster).
<b>Voting Key</b>	Type in 0 or a positive integer as the priority to be Master. 0 means to let system decides Master and Slaves. If positive integer is typed in, the smaller the number is, the higher priority

	for the DSLAM to be a master in a cluster. But if there's already a Master in a cluster, a new added DSLAM cannot try to be the Master by entering a smaller voting key number; the Master cannot be changed in this way.
<b>IP</b>	Type in the cluster IP address. Users can connect to and manage the cluster via the cluster IP address through in-band connection.
<b>Netmask</b>	Type in the cluster's subnet mask.
<b>Gateway</b>	Type in the cluster's gateway IP address.
<b>ID</b>	This field shows Cluster ID, which indicates cluster ordering.
<b>Modify</b>	Click on this button to submit the modification.
<b>Query</b>	Click on this button to query current status.

### To control a member in the cluster:

Select a Cluster member from the drop down list above the menu tree. Then you are controlling that NE now.

## Cluster Setup

**Cluster Configuration**

<b>State</b>	SLAVE			
<b>Name</b>	NE2	<b>IP</b>	172 . 16 . 77 . 88	
<b>Domain</b>	dvt	<b>Netmask</b>	255 . 255 . 255 . 0	
<b>Role</b>	Slave Only ▾	<b>Gateway</b>	172 . 16 . 77 . 177	
<b>Voting key</b>	0			

**Cluster Information**

ID	IP	Role	Name	Domain
1	20.20.20.1	Master	NE1	dvt
2	20.20.20.2	Slave	NE2	dvt

Every time you modify the setting (for example, changing the Role) of any cluster member, the cluster will be reconstructed (cluster state Discovering → Voting → Master or Slave).

If you modify the Role to "Individual", Cluster State will show 'IDLE'. The DSLAM is not in a cluster now.

If you are directly connecting to a Slave in the cluster (connecting via its in-band IP address) you cannot switch to any other member in the cluster.

### 4.1.7 System Inventory

This option allows you to retrieve the system inventory including Description of the System, HW/FW/SW Version, Model Information, Part Number, Hardware Revision, and Serial Number. From the *System* menu, click on *System Inventory*. Click on the **Query** button. The following page is displayed:

Query			
Description	Hardware	Firmware	Software
24-Ports ADSL 2/2+ IP DSLAM	C	1.00B05	1.00B05
Model Information	Part Number	HW Revision	S/N
IDL-2402	GF30F-B1234-AAA1234	AAA	ABC1234567

#### 4.1.8 System Contact Info

This option allows you to specify the system name, system contact, and system location. From the *System* menu, click on *System Contact Info*. The following page is displayed:

**System Contact Information**

---

<input type="button" value="Query"/> <input type="button" value="Modify"/>	
<b>Name</b>	IDL-2402
<b>Contact</b>	
<b>Location</b>	
<b>Description</b>	24-Ports ADSL 2/2+ IP DSLAM

Type in the value you desire, and then click on **Modify** to apply the setting. Click on **Query** to verify if the value is changed.



#### 4.1.9 SNTP

This option allows you to setup the Simple Network Time Protocol (SNTP). From the *System* menu, click on *SNTP*. The following page is displayed.

#### Simple Network Time Protocol

<input type="button" value="Modify"/>		
<b>Time Zone</b>	(25) 0, 0, GMT ,Greenwich Mean Time	
<b>System Date</b>	2008 / 08 / 04	
<b>System Time</b>	06 : 15 : 02	
<b>Polling Interval (60..65535) sec</b>	600	
<b>SNTP Server address</b>	61 , 206 , 115 , 3	

#### SNTP Setup

Label	Description
<b>Time Zone</b>	Sets the local time zone by selecting in the Time Zone drop-down list. Sixty-five of the world's time zones are presented (including those using standard time and summer/daylight savings time).
<b>System Date</b>	Sets system date (yyyy/mm/dd).
<b>System Time</b>	Sets system time (hh:mm:ss).
<b>Polling Interval</b>	Sets the polling interval (in seconds) that SNTP client will sync with a designated SNTP server.
<b>SNTP Server address</b>	Sets the dedicated unicast server IP address for which the SNTP client can synchronize its time.
<b>Modify</b>	Click on this button to submit the modification.

#### 4.1.10 IP Routes

This option allows you to configure the IP route table for the in-band management traffic. From the *System* menu, click on *IP Routes*. The following page is displayed:

Click on the drop-down list to select the page to be displayed first.

#### IP Routes

System Gateway				<input type="text" value="172"/>	<input type="text" value="31"/>	<input type="text" value="1"/>	<input type="text" value="254"/>	<input type="button" value="Set"/>
Next No:		<input type="text" value="5"/>	<input type="button" value="ADD Next"/>					
		<b>Destination</b>		<b>Net Mask</b>		<b>Gateway</b>		
<b>Next</b> →		[ 0 . 0 . 0 . 0 ]		[ 0 . 0 . 0 . 0 ]		[ 0 . 0 . 0 . 0 ]		
Page 1 of 2		<input type="button" value="Delete"/>						
<b>Delete Select</b>	<b>No</b>	<b>Destination</b>		<b>Net Mask</b>		<b>Gateway</b>		
<input type="radio"/>	1	192.168.8.0		255.255.255.0		172.16.100.73		
<input type="radio"/>	2	192.168.7.0		255.255.255.0		172.16.100.73		
<input type="radio"/>	3	192.168.9.0		255.255.255.0		172.16.100.73		
<input type="radio"/>	4	192.168.5.0		255.255.255.0		172.16.100.73		
<input type="radio"/>	5	--		--		--		
<input type="radio"/>	6	--		--		--		
<input type="radio"/>	7	--		--		--		
<input type="radio"/>	8	--		--		--		

#### IP Route Setup

Label	Description
<b>System Gateway</b>	This field shows current system default gateway. You can modify the gateway address by typing in new value and then click on <b>Set</b> .  If the DSLAM is a Slave in a cluster, this field shows the in-band IP address of the Master; if the DSLAM is a Master in a cluster, this field shows the IP address of the Cluster gateway.
<b>ADD Next</b>	Click on this button to add a new IP route.
<b>Destination</b>	Type in the destination IP address for the new IP route.
<b>Net Mask</b>	Type in the subnet mask for the new IP route.
<b>Gateway</b>	Type in the IP address of the gateway for the new IP route.
<b>Delete Select</b>	Click on the radio button to select a route and then click on <b>Delete</b> to remove this route from the table.

#### 4.1.11 User Administration

This option allows you to administer accounts for users who access the DSLAM. From the *System* menu, click on *User Administration*. Click on *Select*: drop-down list and select a page to display. The following page is displayed:

#### User Administration

Page: Page 1 of 4(No.1 to 8)

To Create an new user account need not select radiobox"  "

The "admin" account supports without deleting.

(modify/delete) Select	No.	User Name	Level	Aging day	Start Date	Last Login	Comment
<input checked="" type="radio"/>	1	admin	Super	0		2008/04/23	
<input type="radio"/>	2	test1	Guest	0		2008/04/23	comment2

#### User Administration

Label	Description															
<b>Page</b>	Click on the drop-down list and select the page to be displayed.															
<b>New</b>	<p>Click on this button to create a new user. You will enter the following page:</p> <p style="text-align: center;"><a href="#">User Administration</a></p> <hr/> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p><input type="button" value="Create"/></p> <p><input type="button" value="Back"/></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"><b>User Name</b></td> <td style="width: 50%; text-align: center;">username2</td> <td style="width: 30%;"></td> </tr> <tr> <td><b>Password</b></td> <td style="text-align: center;">*****</td> <td></td> </tr> <tr> <td><b>Access Level</b></td> <td style="text-align: center;"><span style="border: 1px solid black; padding: 2px;">GUSER</span></td> <td></td> </tr> <tr> <td><b>Expire Day</b></td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td><b>Comment</b></td> <td style="text-align: center;">comment2</td> <td></td> </tr> </table> </div> <p>Once you have typed in all the information for the new user, click on the <b>Create</b> button.</p>	<b>User Name</b>	username2		<b>Password</b>	*****		<b>Access Level</b>	<span style="border: 1px solid black; padding: 2px;">GUSER</span>		<b>Expire Day</b>	0		<b>Comment</b>	comment2	
<b>User Name</b>	username2															
<b>Password</b>	*****															
<b>Access Level</b>	<span style="border: 1px solid black; padding: 2px;">GUSER</span>															
<b>Expire Day</b>	0															
<b>Comment</b>	comment2															
<b>Delete / Modify</b>	Click on the radio button on the leftmost column of the user table to select the user you want to delete / modify. Then click on <b>Delete / Modify</b> button. Note that the default <b>admin</b> user cannot be deleted.															

<b>User Name</b>	Shows the name of the user (up to 32 characters).
<b>Level</b>	The available access levels include: <b>SUPERUSER, ENGINEER, and GUEST.</b>
<b>Aging day</b>	Set password expiration days (0 for no expiration days)
<b>Start Date</b>	Shows the day when the account was first created.
<b>Last Login</b>	Shows the day when a user last login.
<b>Comment</b>	Description about the user account (up to 31 characters).

When a new account is added: (for example, **Test1** is added)

When user **Test1** intends to login for the first time, he will be asked to change his password and then login with the new password.

## 4.1.12 Duplicator

This option allows you to duplicate all/partial the configurations of one selected line port (as a template) to other ports (as many as you want). From the *System* menu, click on *Duplicator*. The following page is displayed. Select the content of configurations (ADSL line configuration, ADSL profiles, or...) you want to duplicate first. Then specify the port number as the template (the source port to be copied), and select the target ports to which the template is going to be copied. At last click on **Paste** to apply.

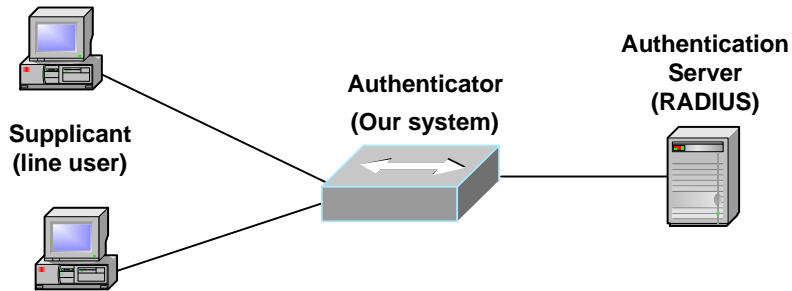
### System Duplicator

Templated ADSL Port		1																					
<input type="button" value="Paste"/>																							
To be duplicated ADSL Port:																							
01	<input type="checkbox"/>	02	<input type="checkbox"/>	03	<input type="checkbox"/>	04	<input type="checkbox"/>	05	<input type="checkbox"/>	06	<input type="checkbox"/>	07	<input type="checkbox"/>	08	<input type="checkbox"/>	09	<input type="checkbox"/>	10	<input type="checkbox"/>	11	<input type="checkbox"/>	12	<input type="checkbox"/>
13	<input type="checkbox"/>	14	<input type="checkbox"/>	15	<input type="checkbox"/>	16	<input type="checkbox"/>	17	<input type="checkbox"/>	18	<input type="checkbox"/>	19	<input type="checkbox"/>	20	<input type="checkbox"/>	21	<input type="checkbox"/>	22	<input type="checkbox"/>	23	<input type="checkbox"/>	24	<input type="checkbox"/>
Select	Function	Decription																					
<input type="checkbox"/>	ADSL Line Configuration	ADSL Line configuration																					
<input type="checkbox"/>	ADSL Profiles	Service profile, Specturm profile and TCA profile have serviced in ADSL Port																					
<input type="checkbox"/>	ADSL Port Admin Status	ADSL line Admin Status																					
<input type="checkbox"/>	DSL Identify Trust	DSL Identify Trusted Status																					
<input type="checkbox"/>	PVC VLAN BRIDGE	ADSL Port PVC,Bridge and VLAN Settings																					
<input type="checkbox"/>	IGMP ACL	IGMP ACL Profile in Binding table																					
<input type="checkbox"/>	FILTERING	All of the Filtering																					
<input type="checkbox"/>	Priority Remark	VLAN Priority Remark table exclude Re-Generation function																					
<input type="checkbox"/>	Priority Re-Generation	The Re-Generation function in VLAN VLAN Priority Remark table																					
<input type="checkbox"/>	Ether policer	Ether policer of the Rate limit table																					

## 4.2 802.1x Security

### 4.2.1 System Protocol

This option allows you to enable/disable 802.1x authentication function of the system, and setup the 802.1x authentication mechanism for each line bridge port. Before you setup 802.1x for a line bridge port, you must create the ADSL PVC (bridge port) first.



From the **802.1x Security** menu, click on *System Protocol*. The following page is displayed:

#### Main Setting

#### System Protocol

**System Authentication**  
  802.1x Enabled

**Port Authentication**  
 

\* Stands for default value  
 [1]Accounting Interim Interval (300\*.600)Second  
 [2]All of the Max.Request(1,2\*.10)

Select Port	Enable	Accounting Control	Accounting Interval	Port Control	Max Request Authentication	ReAuthentication Control	Max Request ReAuthentication
01	<input type="checkbox"/> OFF	OFF	300	Auto	2	OFF	2
02	<input type="checkbox"/> Select	Select		Select		Select	
03	<input type="checkbox"/> Select	Select		Select		Select	
04	<input type="checkbox"/> Select	Select		Select		Select	
05	<input type="checkbox"/> Select	Select		Select		Select	
06	<input type="checkbox"/> Select	Select		Select		Select	
07	<input type="checkbox"/> Select	Select		Select		Select	
08	<input type="checkbox"/> Select	Select		Select		Select	
09	<input type="checkbox"/> Select	Select		Select		Select	
10	<input type="checkbox"/> Select	Select		Select		Select	
11	<input type="checkbox"/> Select	Select		Select		Select	
12	<input type="checkbox"/> Select	Select		Select		Select	

[\[ ADSL PVC CONFIGURATION \]](#)

### System Protocol Setup - Main Setting

Label	Description
<b>System Authentication section</b>	
Click on the drop-down list to enable or disable the 802.1x authentication function of the system. If you select "Disabled", any setting in the <i>Port Authentication</i> section will not take effect.	
<b>Port Authentication section – Main Setting</b>	
<div style="border: 1px solid black; padding: 2px; display: inline-block;"> <span style="border: 1px solid black; padding: 1px;">Port 01~12</span> <span style="border: 1px solid black; padding: 1px; margin-left: 10px;">PVC-1</span> </div>	Select the line bridge port range to be listed.
<b>Select Port</b>	Remember to select the checkbox when you want to modify/delete the setting of a bridge port or set a bridge port to its default value.
<b>Enable</b>	OFF/ON: disable/enable 802.1x authentication function for the bridge port. When 802.1x is disabled, the system allows bidirectional normal traffic in this port in spite of its authentication state. Default is OFF.
<b>Accounting Control</b>	OFF: notify RADIUS server to stop accounting for this port. ON: notify RADIUS server to start accounting for this port.  Default is OFF.
<b>Accounting Interval</b>	Type in the interval (300 ~ 600 sec) between accounting information updates. Default is 300 sec.
<b>Port Control</b>	<b>Force-unAuth:</b> cause the port to stay in the unauthorized state, ignoring all attempts by the client to authenticate.  <b>Force-Auth:</b> disable 802.1X authentication and cause the port to transition to the authorized state without any authentication exchange required.  <b>Auto:</b> enable 802.1x authentication and cause the port to begin the authentication process from unauthorized state.
<b>Max Authentication Request</b>	Type in the number of times our system will send authentication requests to Supplicant if no response from the Supplicant is received. Default value is 2.
<b>ReAuthentication Control</b>	OFF: disable re-authentication after a period of time ON: enable re-authentication after a period of time  Default is OFF.
<b>Max Request</b>	Type in the number of times our system will send authentication
<b>ReAuthentication</b>	requests to the authentication server (RADIUS) if no response from the server is received. Default value is 2.

## Timer Setting

### System Protocol

**System Authentication**

**Port Authentication**

\* Stands for default value  
[1]All of the Timeout (0..60\*.65535)Second  
[2]Tx Period (1..30\*.65535)Second  
[3]Re-Auth Period (60..3600\*.65535)Second  
[4]Quiet Period(0..60\*.65535)Second

Select Port	Supplicant Timeout	Server Timeout	Tx Period	ReAuthentication Period	Quiet Period
01 <input type="checkbox"/>	60	60	30	3600	60
02 <input type="checkbox"/>					
03 <input type="checkbox"/>					
04 <input type="checkbox"/>					
05 <input type="checkbox"/>					
06 <input type="checkbox"/>					
07 <input type="checkbox"/>					
08 <input type="checkbox"/>					
09 <input type="checkbox"/>					
10 <input type="checkbox"/>					
11 <input type="checkbox"/>					
12 <input type="checkbox"/>					

[ [ADSL PVC CONFIGURATION](#) ]



### System Protocol Setup – Timer setting

Label	Description
<b>Port Authentication section – Timer Setting</b>	
<div style="display: flex; gap: 10px;"> <span>Port 01~12 ▼</span> <span>PVC-1 ▼</span> </div>	Select the line bridge port range to be listed.
<b>Select Port</b>	Remember to select the checkbox when you want to modify/delete the setting of a bridge port or set a bridge port to its default value.
<b>Supplicant Timeout</b>	Type in the number of seconds our system will wait for a response before resending the request to the supplicant. Default is 60 (sec).
<b>Server Timeout</b>	Type in the number of seconds our system will wait for a reply before resending the response to the authentication server. Default is 60 (sec).
<b>Tx Period</b>	Type in the number of seconds our system will wait for a response to an EAP-request/identity frame from the supplicant before resending the request. Default is 30 (sec).
<b>ReAuthentication Period</b>	Type in the number of seconds between re-authentication requests. Default is 3600 (sec).
<b>Quiet Period</b>	Type in the number of seconds that our system remains in the quiet state following a failed authentication exchange with the supplicant. Default is 60 (sec).

## 4.2.2 RADIUS & Local Profile

The IDL-2402 system supports RADIUS client function for authenticating line ports with local authentication database or remote RADIUS server. From the *802.1x Security* menu, click on *RADIUS & Local Profile*. The following page is displayed:

**RADIUS & Local Profile**

---

**Authentication Method**  


AAA stands for Authentication, Authorization, and Accounting.

AAA Method1	AAA Method2	AAA Method3	AAA Method4
NONE	NONE	NONE	NONE

**RADIUS Server**  
 

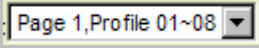
Select	RADIUS Server IP	Authentication Port(default 1812)	Accounting port(default 1813)	MAX Fail (1..10)	VLAN ID	Secret ID
Index#1 <input type="checkbox"/>	0 . 0 . 0 . 0					
Index#2 <input type="checkbox"/>	0 . 0 . 0 . 0					
Index#3 <input type="checkbox"/>	0 . 0 . 0 . 0					

**Local Profile**  
 Select : Page 1, Profile 01~08   

Select	Username	Password	Select	Username	Password
No.01 <input type="checkbox"/>			No.02 <input type="checkbox"/>		
No.03 <input type="checkbox"/>			No.04 <input type="checkbox"/>		
No.05 <input type="checkbox"/>			No.06 <input type="checkbox"/>		
No.07 <input type="checkbox"/>			No.08 <input type="checkbox"/>		

### RADIUS & Local Profile Setup

Label	Description
<b>Authentication Method section</b>	
	In this section, operators setup four AAA methods for the system to use, and the priority order is Method1 > Method2 > Method3 > Method4. If a user cannot be authenticated when the system uses Method1, the system will then try to use Method2, and so on. Click on the AAA method drop-down list and select a RADIUS server index or the local profile, which has been already configured in the RADIUS Server section or Local Profile section. At last click on Modify button.
<b>RADIUS Server section</b>	
<b>Select (Index#n)</b>	Remember to select the checkbox when you want to modify or delete a RADIUS server entry.
<b>RADIUS Server IP</b>	Type in the IP address of the remote RADIUS server.
<b>Authentication Port</b>	Type in the port number for RADIUS Authentication in the Layer-4 header. Default is 1812.
<b>Accounting Port</b>	Type in the port number for RADIUS Accounting in the Layer-4 header. Default is 1813.

<b>Max Fail</b>	Type in the maximum allowable times of continuously failed authentication attempts.
<b>VLAN ID</b>	Type in the VID of the VLAN which the RADIUS server belongs to.
<b>Secret ID</b>	Type in the authentication key in text format.
<b>Local Profile section</b>	
	<p>Click on the drop-down list and select the profile range to be listed.</p> <p>There are total 8 pages and 8 profiles per page (up to 64 local profiles can be set in our system).</p>
<b>Username</b>	Type in the username for authentication.
<b>Password</b>	Type in the password for authentication.

## 4.3 Bridge

### 4.3.1 Interface Setup

#### 4.3.1.1 GIGA Bridge

This option allows you to setup the GBE (trunk) bridge interface. From the *Bridge* menu, click on *Interface Setup* and then *GIGA Bridge*. The following page is displayed:

#### GIGA Bridge

Select	Port	VID	MaxMac	VPri	VTag	Stack	Ingress	Acc.Frm	Isolation
<input checked="" type="radio"/>	UpLink#1	1	1024	0	Tagged	No Stack	On	ALL	ON

#### GIGA (Trunk) Bridge Setup

Label	Description
<b>Mode</b>	Click on the drop-down list and specify the trunk port to be an Uplink or User (especially for system stacking).
<b>VID</b>	Type in the default port VLAN ID. Valid value is 1 ~ 4094.
<b>Max MAC</b>	Type in the maximum number of MAC addresses that can be learned by the giga bridge port (1 ~ 4096).
<b>VLAN</b>	<p>VLAN setting for the traffic. Includes three drop-down lists:</p> <p><b>Pri-0 ~ 7:</b> Set the default VLAN priority level.</p> <p><b>UnTagged/Tagged:</b> Select to untag / tag the outgoing (upstream direction for trunk bridge ports) packets. If UnTagged is selected, a double-tagged packet will leave single-tagged (the outer most VLAN tag is removed) and a single-tagged packet will leave untagged.</p> <p><b>no Stack/Stack:</b> Disable/Enable N:1 VLAN stacking (our system adds the default VLAN tag to all the incoming frames through this port).</p> <p><i>Note:</i> When an untagged frame enters the IDL-2402, it is assigned the default PVID of the ingress (incoming) bridge port and become a single-tagged frame no matter VLAN stacking is enabled or not.</p>
<b>Ingress</b>	<p>Set Ingress ON: check if the VID of the incoming frame is in the member set. If not in the member set, block the frame.</p> <p>Set Ingress OFF: Ingress filter disabled.</p>
<b>Acc.Frm</b>	Click on the drop-down list and select to accept ALL Frame, only VLAN tagged frame, or only Untagged frame.

<b>Isol</b>	ON/OFF: to enable/disable isolation. When port isolation is enabled, packets received from a trunk port (when both the trunk interfaces are configured as up-link) cannot be forwarded to the other trunk port even for broadcasting.
<b>Modify</b>	To modify the configuration of a giga port: <ol style="list-style-type: none"><li>1. Click on the radio button to select trunk port 1</li><li>2. Change the parameter values</li><li>3. Click on Modify button to apply new values</li></ol>
<b>Query</b>	Click on this button to query current status.

### 4.3.1.2 ADSL PVC

This option allows you to setup the ADSL PVC. From the *Bridge* menu, click on *Interface Setup* and then *ADSL PVC*. The following page is displayed:

**ADSL PVC Setup**

VPI:  VCI:  Traffic:Rx  Tx

Encap  Protocol Base VLAN

ALL

Select	Port	VPI	VCI	Rx Traffic	Tx Traffic	ENCAP	Protocol Base VLAN
<input type="radio"/>	1	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	2	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	3	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	4	0	35	Default	Default	LLC	Disabled
<input checked="" type="radio"/>	5						
<input type="radio"/>	6						
<input type="radio"/>	7						
<input type="radio"/>	8						
<input type="radio"/>	9	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	10	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	11	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	12	0	35	Default	Default	LLC	Disabled

[\[ ATM TRAFFIC PARAMETER \]](#)

You shall click on the drop-down lists to select port range and PVC first. Then the data of these PVCs (bridge ports) you selected will be displayed. Click on the radio button to select the PVC you want to create, modify, or delete.

#### ADSL PVC Setup

Label	Description
<b>VPI</b>	Type in the VPI value: 0 ~ 255. Default value is 0.
<b>VCI</b>	Type in the VCI value: 21, 32 ~ 65535. Default value is 35.
<b>Traffic</b>	Click on the drop-down list and select a traffic type for transmit and receive direction respectively. Available options are created in the ATM Traffic Descriptor page. See section 4.5.1

<b>Encap</b>	Select AAL5 Encapsulation Type: VCMUX, LLC, or AUTO (for PVC#1 ~ PVC#4 only)*.
<b>Protocol Based VLAN</b>	Select in the drop-down list to enable or disable protocol based VLAN function. When protocol based VLAN is enabled, the bridge port will work according to the protocol based VLAN table (refer to section 4.3.2).
<b>All</b>	Select the check box to copy specified circuit to all remainder circuits in current page.
<b>Create</b>	Click on the radio button to select a PVC (bridge port) that has not been created. Set the parameter values and then click on <b>Create</b> to create a PVC.
<b>Modify</b>	Click on the radio button to select the PVC (bridge port) you want to modify. Change the parameter values and then click on <b>Modify</b> .
<b>Delete</b>	Click on the radio button to select the PVC (bridge port) you want to delete. Then click on <b>Delete</b> to remove the PVC.
<b>Query</b>	Click on this button to get the most recent data.

\*The IDL-2402 supports auto-detection of the ATM AAL5 encapsulation method, LLC or VC-Mux. Meanwhile, the IDL-2402 is also able to automatically sense the following protocol encapsulations: PPPoE over ATM (per RFC 2684), IPoE over ATM bridge mode, and PPP over ATM. IPoA works on individual PVC.

However, there are limitations on auto-detection of encapsulations:

1. LLC/VC-Mux automatic detection is only applicable to PVC#1 ~ PVC#4 of each ADSL port. PVC#5 ~ PVC#8 must be assigned the ATM AAL5 encapsulation method manually.
2. PPPoA works only for PVC#1 ~ PVC#4 and the LLC/VC-Mux automatic detection must be enabled.

Refer to section 4.3.7 for IPoA configuration.

### 4.3.1.3 ADSL Bridge

This option allows you to setup the ADSL bridge interface. From the *Bridge* menu, click on *Interface Setup* and then *ADSL Bridge*. The following page is displayed:

ADSL Bridge

VID: 
 VLAN: 
 Pri: 
 no Stack:

Ingress: 
 Acc.Frm: 
 Isolation: 
 Priority Force:

ALL

Port 01~12:

Select	Port	VID	VLAN	Ingress	Acc.Frm	Isolation	Priority Force
<input checked="" type="radio"/>	1	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disbale
<input type="radio"/>	2	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disbale
<input type="radio"/>	3	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disbale
<input type="radio"/>	4	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disbale
<input type="radio"/>	5	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disbale
<input type="radio"/>	6						
<input type="radio"/>	7	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disbale
<input type="radio"/>	8	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disbale
<input type="radio"/>	9	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disbale
<input type="radio"/>	10	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disbale
<input type="radio"/>	11	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disbale
<input type="radio"/>	12						

[ [ADSL PVC CONFIGURATION](#) | [STATIC VLAN](#) ]

You shall click on the drop-down lists to select port range and PVC first. Then the data of these PVCs (bridge ports) you selected will be displayed. Click on the radio button to select the bridge port you want to modify.

#### ADSL Bridge Setup

Label	Description
<b>VID</b>	Type in the default port VLAN ID. Valid value is 1 ~ 4094.
<b>VLAN</b>	VLAN setting for the egress traffic. Includes three drop-down lists:  <b>UnTagged/Tagged:</b> select untagging/tagging the outgoing frames (downstream direction for line bridge port). If UnTagged is selected, a double-tagged packet will leave single-tagged (the outer most VLAN tag is



	<p>removed) and a single-tagged packet will leave untagged.</p> <p><b>Pri-0 ~ 7:</b> set the default VLAN priority level.</p> <p><b>no Stack/Stack/TLS:</b> disable N:1 VLAN stacking / enable N:1 VLAN stacking (our system adds the default VLAN tag to all the incoming frames through this port) / enable TLS (transparent LAN service) so that this bridge port becomes VLAN transparent (refer to DSL Forum, TR-101). A pre-configured S-Tag is used to encapsulate TLS traffic going through this port. That is, an S-Tag (PVID here) will be added to all the upstream frames received on this port, and the C-Tags will be the original tags of these frames (no C-Tag for untagged incoming frames). On the other hand, the S-tag will be removed from all the downstream (outgoing) frames.</p> <p><i>Note:</i> When an untagged frame enters the IDL-2402, it is assigned the default PVID of the ingress (incoming) bridge port and become a single-tagged frame no matter VLAN stacking is enabled or not.</p>
<b>Ingress</b>	<p>Set Ingress ON: check if the VID of the incoming frame is in the member set. If not in the member set, block the frame.</p> <p>Set Ingress OFF: Ingress filter disabled.</p>
<b>AccFrm</b>	Click on the drop-down list and select to accept ALL Frame, only VLAN tagged frame, or only Untagged frame.
<b>Isolation</b>	ON/OFF: to enable/disable isolation. When port isolation is enabled, packets received from a line bridge port (including trunk interface configured as user-link) cannot be forwarded to any other line bridge port even for broadcasting.
<b>Priority Force</b>	<p>Click on the drop-down list and select the priority-forcing mode. Options are:</p> <p><b>Disabled:</b> Reserve the original priority of all packets.</p> <p><b>Ingress:</b> Force applying the default VLAN priority value to all the packets received on this bridge port (so this rule will work on all the member-set of this bridge port).</p> <p><b>Egress:</b> Force the priority value of all packets sent out from this bridge port's default VLAN to be the default VLAN priority (so this rule only works on default VLAN of this bridge port).</p> <p><b>Both:</b> Combine the rules of Ingress and Egress.</p>
<b>All</b>	Select the check box to copy specified circuit to all remainder circuits in current page.
<b>Modify</b>	Click on the radio button to select the bridge port you want to modify. Change the parameter values and then click on <b>Modify</b> .
<b>Query</b>	Click on this button to get the most recent data.

### 4.3.1.4 ADSL Port Security

This option allows you to setup the ADSL port security. From the *Bridge* menu, click on *Interface Setup* and then *ADSL Port Security*. The following page is displayed:

#### ADSL Port Security

MaxMAC:  MAC Learning:  IP Allowed:

ALL

Select	Port	Max MAC	MAC Learning	IP Allowed
<input checked="" type="radio"/>	1	4	Enabled	Disabled
<input type="radio"/>	2	4	Enabled	Disabled
<input type="radio"/>	3	4	Enabled	Disabled
<input type="radio"/>	4	4	Enabled	Disabled
<input type="radio"/>	5	8	Enabled	Disabled
<input type="radio"/>	6			
<input type="radio"/>	7	8	Enabled	Disabled
<input type="radio"/>	8	8	Enabled	Disabled
<input type="radio"/>	9	4	Enabled	Disabled
<input type="radio"/>	10	4	Enabled	Disabled
<input type="radio"/>	11	4	Enabled	Disabled
<input type="radio"/>	12			

[ [ADSL PVC CONFIGURATION](#) | [STATIC VLAN](#) ]

You shall click on the drop-down lists to select port range and PVC first. Then the data of these PVCs (bridge ports) you selected will be displayed. Click on the radio button to select the bridge port you want to modify.

#### ADSL Port Security Setup

Label	Description
<b>Max MAC</b>	Type in the maximum number of MAC addresses that can be learned by the ADSL bridge port (1 ~ 128).
<b>MAC Learning</b>	Select to enable/disable MAC learning ability. Sometimes you can disable MAC learning on specified bridge port. This function is for 1:1 VLAN translation scenario.
<b>IP Allowed</b>	Select to enable/disable IP Allowed function. When you enable IP Allowed function on a bridge port, this bridge port will work according to the Static Allowed IP table (refer to section 4.3.2).

	So you need to define the source IP addresses that bind to this bridge port. Then the IP packets that contain these source IP addresses can pass through this bridge port; otherwise the packets will be blocked.
<b>All</b>	Select the check box to copy specified circuit to all remainder circuits in current page.
<b>Modify</b>	Click on the radio button to select the bridge port you want to modify. Change the parameter values and then click on <b>Modify</b> .
<b>Query</b>	Click on this button to get the most recent data.

## 4.3.2 VLAN Configuration

### 4.3.2.1 Static VLAN

This option allows you to configure the static VLAN table. From the *Bridge* menu, click on *VLAN Configuration* and then *Static VLAN*. The following page is displayed. Click on the radio button to select *CONFIG VLAN* to configure static VLAN for the bridge ports or *SHOW VLAN* to display the VLAN table.

#### CONFIG VLAN

Click on the drop-down list to select ADSL or GIGA port, and then select a port and PVC if ADSL is selected. Once you have selected the bridge interface, its current static VLAN setting is displayed. To add a new VLAN member, type in VID for the **New VID** field and then select Tagged/UnTagged for **VLAN Tag**, ON/OFF for **Isolation**, and VLAN priority level (specify a number or reserve the original value) for **Priority**. At last click on **Create=>** button. To modify or delete a VLAN, select the checkboxes of the entries you want to modify or delete and then click on **Modify** or **Delete** button.

#### Static VLAN

CONFIG VLAN  SHOW VLAN

ADSL	Port-1	PVC-1			
Port	Default VID	VLAN ID List			
ADSL Port1-PVC1	1	5,8			
<input type="checkbox"/> <input type="checkbox"/>	<b>Added VID</b>	<b>Vlan Tag</b>	<b>Isolation</b>	<b>Priority</b>	
<input type="checkbox"/>	5	Tagged	ON	Reserved	
<input type="checkbox"/>	8	Tagged	OFF	Reserved	
	<b>New VID</b>	<b>Vlan Tag</b>	<b>Isolation</b>	<b>Priority</b>	
<input type="button" value="Create=&gt;"/>	[ -- ]	Tagged	ON	Reserved	
[ GIGA BRIDGE   ADSL BRIDGE ]					

## SHOW VLAN

In the following page, type in the VID and then click on Query. All the bridge ports belonging to the VLAN and the configuration data of these ports will be displayed in the table.

### Static VLAN

**CONFIG VLAN**  **SHOW VLAN**

VID:

No.	Default VID	VLAN Tag	VLAN Priority	Isolated	Egress Port
1	True	UnTagged	Reserved	Enabled	GIGA UPLINK:1
2	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:1-1
3	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:2-1
4	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:3-1
5	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:4-1
6	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:5-1
7	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:7-1
8	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:8-1
9	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:9-1
10	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:10-1
11	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:11-1
12	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:12-1
13	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:6-5

[ [GIGA BRIDGE](#) | [ADSL BRIDGE](#) ]

### 4.3.2.2 Protocol Base VLAN

This option allows you to configure the protocol based VLAN table. From the *Bridge* menu, click on *VLAN Configuration* and then *Protocol Base VLAN*. The following page is displayed. Select the checkboxes of the entries you want to create or delete. To create a new entry, type in the VLAN ID and select the EtherType (protocol). If you select **Other** for EtherType, type the EtherType value in the rightmost field.

Protocol Base VLAN

---

(1)Page1 of 4 ▾

Create Delete Query

Select	NO	VLAN ID (1..4094)	EtherType	
<input type="checkbox"/>	1	1	PPPoE Discovery Stage ▾	--
<input type="checkbox"/>	2	2	PPPoE Session Stage ▾	--
<input checked="" type="checkbox"/>	3	3	Other ▾	0x 8035
<input type="checkbox"/>	4		Select ▾	0x
<input type="checkbox"/>	5		Select ▾	0x
<input type="checkbox"/>	6		Select ▾	0x
<input type="checkbox"/>	7		Select ▾	0x
<input type="checkbox"/>	8		Select ▾	0x

[ [STATIC VLAN](#) ]

### 4.3.2.3 Translation VLAN

This option allows you to configure the translation VLAN table, which defines some special VLAN working rules such as VLAN stack, VLAN cross-connect, etc. Before you configure the Translation VLAN table for a line bridge port, you shall configure the Static VLAN table for this line bridge port and the GIGA bridge port in advance. Also, you shall disable VLAN stacking feature of this line bridge port in the ADSL bridge interface setup page (refer to section 4.3.1), otherwise the VLAN translation rule here will not take effect. From the *Bridge* menu, click on *VLAN Configuration* and then *Translation VLAN*. The following page is displayed. Click on the radio button to select translation Mode first.

Translation VLAN

---

1:1 User Mode  
  N:1 User Mode  
  C\_VLAN Stacking Replaced Mode

sTag ether type: 0x 8100

ADSL Port-1 PVC-1

Port	Default VID	VLAN ID List			
ADSL Port1-PVC1	1	1,5,8			
<input type="button" value="Delete"/>	ADSL VID	UPLINK Port	UPLINK VID	UPLINK Priority	VLAN MODE
<input type="checkbox"/>	1	GIGA1	1	0	RESERVED
<input type="checkbox"/>	5	GIGA1	1	1	STACKING
ADSL VID	G1 UPLINK VID	UPLINK Priority	VLAN MODE		
<input type="button" value="Create==&gt;"/>	1*	<input type="button" value="Select"/>	<input type="button" value="Select"/>	<input type="button" value="Select"/>	

[ GIGA BRIDGE | ADSL BRIDGE | STATIC VLAN ]

Actually the IDL-2402 provides five translation modes: four for 1:1 VLAN, one for N: 1 VLAN (refer to *DSL Forum TR-101*).

**1:1 VLAN** (including 1:1 User Mode and C\_VLAN Stacking Replaced Mode):

If the ADSL user bridge port only has 1:1 VLAN, then MAC learning function of this bridge port can be disabled.

#### 1. Reserved

In this mode, the system does not make any change on C-Tag. That is the uplink port's S-Tag is actually the C-Tag. The system provides a tunnel for the user port and uplink port. And one VLAN ID can only make one tunnel.

#### 2. Replaced

In this mode, the system will change the user port's C-Tag to the Uplink port's S-Tag. And the mapping is one to one, that is, one user port's C-Tag (one VID) can only translate to one uplink port's S-Tag (one VID), and vice versa. For example, for ADSL Port1-PVC1, if ADSL VID 5 translates to GIGA1 VID 1, then you cannot make ADSL VID 5 translate to another GIGA VID. You also cannot make another ADSL VID translate to GIGA VID1.

**Upstream:**

C-Tag→(User port)------(Uplink port)→S-Tag

**Downstream:**

S-Tag→(Uplink port)------(User port)→C-Tag

**3. Stacking**

In this mode, the system will add S-TAG before user port's C-TAG. Note that the mapping from C-Tag to S-Tag+C-Tag is still one to one. So a user port's C-Tag can't be used for another translation rule, as well as an uplink port's S-Tag+C-Tag.

**Upstream:**

C-Tag→(User port)------(Uplink port)→S-Tag+C-Tag

**Downstream:**

S-Tag+C-Tag→(Uplink port)------(User port)→C-Tag

**4. Stacking and Replaced**

In this mode, the system will replace the user port's C-Tag to C'-Tag and add S-Tag before C'-Tag. Note that the mapping from C-Tag to S-Tag+C'-Tag is still one to one. So a user port's C-Tag can't be used for another translation rule, as well as an uplink port's S-Tag+C'-Tag.

**Upstream:**

C-Tag→(User port)------(Uplink port)→S-Tag+C'-Tag

**Downstream:**

S-Tag+C'-Tag→(Uplink port)------(User port)→C-Tag

Translation VLAN

1:1 User Mode  N:1 User Mode  C\_VLAN Stacking Replaced Mode

sTag ether type: 0x 8100

ADSL Port-1 PVC-1

Port	Default VID	VLAN ID List					
ADSL Port1-PVC1	1	1,5,8					
<input type="button" value="Delete"/>	ADSL VID	UPLINK Port	UPLINK VID	New CVLAN ID	New CVLAN Priority	UPLINK Priority	VLAN MODE
<input type="button" value="Create==&gt;"/>	ADSL VID	G1 UPLINK VID		New CVLAN ID	New CVLAN Priority	UPLINK Priority	VLAN MODE
	1*	Select	[ ]	Select	Select	Select	CTAG

[ GIGA BRIDGE | ADSL BRIDGE | STATIC VLAN ]



## N:1 VLAN (N:1 User Mode):

N:1 can also be called shared VLAN, so in this mode MAC learning function of the bridge ports must not be disabled.

### 1. Replaced N:1

In this mode, the system will change the user port's C-Tag to the Uplink port's S-Tag. And the mapping is N to 1, so a user port's C-Tag can't be used for another VLAN translation rule. But an uplink port's S-Tag can be used for another N:1 VLAN translation rule.

So in this mode several bridge ports can have the same VLAN cross-connect rule.

## Translation VLAN

1:1 User Mode  N:1 User Mode  C\_VLAN Stacking Replaced Mode

sTag ether type: 0x 8100

ADSL  Port-1  PVC-1

Port	Default VID	VLAN ID List			
ADSL Port1-PVC1	1	1,5,6			
<input type="button" value="Delete"/>	ADSL VID	UPLINK Port	UPLINK VID	UPLINK Priority	VLAN MODE
ADSL VID	G1 UPLINK VID	UPLINK Priority	VLAN MODE		
<input type="button" value="Create==&gt;"/>	1* <input type="button" value="v"/>	Select <input type="button" value="v"/>	Select <input type="button" value="v"/>	REPLACED N:1 <input type="button" value="v"/>	


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### 4.3.2.4 Static Allowed IP

This option allows you to configure the Static Allowed IP table. From the *Bridge* menu, click on *VLAN Configuration* and then *Static Allowed IP*. The following page is displayed. To make bridge port work according to this Static Allowed IP table, the IP allowed function must be enabled (refer to section 4.3.1).

Static Allowed IP

---

**CONFIG ALLOWED IP** 

Delete Select	No	Port	VLAN ID	Allowed Source IP
<input type="checkbox"/>	1	ADSL Port1-PVC1	1	172.2.0.1
<input type="checkbox"/>	2	ADSL Port8-PVC1	8	172.2.0.1

ADSL  Port-1  PVC-1

VLAN ID:

Allowed IP:  .  .  .

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Click on the drop-down lists to select ADSL port and PVC number, then type in VID and allowed source IP that can pass through the VLAN.

### 4.3.2.5 MAC Spoofing

This option allows you to enable/disable anti-MAC Spoofing function and MAC-Spoofing detection log function. From the *Bridge* menu, click on *VLAN Configuration* and then *MAC Spoofing*. The following page is displayed.

#### MAC Spoofing

Spoofing <input type="button" value="ON"/> <input type="button" value="Log"/> <input type="button" value="OFF"/> <input type="button" value="Set"/> <input type="button" value="Query"/>			
No	Port	VLAN ID	MAC
[ GIGA BRIDGE   ADSL BRIDGE ]			

#### MAC Spoofing Setup

Label	Description
<b>Spoofing</b>	Click on the drop-down list to select: <b>OFF:</b> The system is able to provide service to users with duplicate MAC addresses. <b>ON:</b> The system is able to deny service to users with duplicate
<b>Log</b>	Click on the drop-down list to select: <b>OFF:</b> No log of MAC spoofing data when detected. <b>ON:</b> The system provides log when duplicated MAC addresses detected.
<b>Set</b>	Click on this button to apply the setting.
<b>Query</b>	Click on this button to get the MAC spoofing information (the Log function must be enabled).

### 4.3.3 Access Control

#### 4.3.3.1 Filtering

This option allows you to setup the filter rule for the packets. From the *Bridge* menu, click on *Access Control* and then *Filtering*. The following page is displayed. Click on *Filtering Type* drop-down list to select a filtering type first.

Filtering

Filtering Type

**Filtering Table**

(0) Protocol

(1) Source MAC

(2) Source IP Address

(3) Layer 4 Destination Port

(4) Destination IP

(5) Destination MAC

(6) Ether Type

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### Protocol Filtering

Protocol Filtering

Filtering Type  No. From  To

No range from 1 to 256

No.	Port	Passable Protocol
1	ADSL Port1-PVC1	ICMP

ADSL  PVC-1

Next No:  Protocol

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#### Protocol Filtering Setup

Label	Description
<b>Filtering Type</b>	You can also select the filtering type here.
<b>No. From...To...</b>	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
<b>Query</b>	Once you have specified the serial number, click on this button to display the filter rules.

<b>Delete</b>	Once you have specified the serial number, click on this button to delete the filter rules in the table.
<input type="text" value="ADSL"/> <input type="text" value="Port-1"/> <input type="text" value="PVC-1"/>	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
<b>Protocol</b>	Click on this drop-down list and select a protocol to deny: ICMP, IGMP, IP in IP, TCP, GRP, IGP, UDP, GRE, EIGRP, or OSPF.
<b>Create</b>	Click on this button to create a new filter rule in the table.

## Source MAC Filtering

### Source MAC Filtering

Filtering Type:  No. From  To

No range from 1 to 256

No.	Port	Source MAC
1	GIGA1	00:30:4f:aa:01:c0

Next No:

Source MAC

[ [GIGA BRIDGE](#) | [ADSL BRIDGE](#) | [STATIC VLAN](#) ]

### Source MAC Filtering Setup

Label	Description
<b>Filtering Type</b>	You can also select the filtering type here.
<b>No. From...To...</b>	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
<b>Query</b>	Once you have specified the serial number, click on this button to display the filter rules.
<b>Delete</b>	Once you have specified the serial number, click on this button to delete the filter rules in the table.
<input type="text" value="ADSL"/> <input type="text" value="Port-1"/> <input type="text" value="PVC-1"/>	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
<b>Source MAC</b>	Type in the MAC Address of the source.
<b>Create</b>	Click on this button to create a new filter rule in the table.

## IP Address Filtering

### Source IP Address Filtering

Filtering Type <input type="text" value="Source IP"/> No. From <input type="text" value="1"/> To <input type="text" value="2"/>			
No range from 1 to 256			
<input type="button" value="Query"/> <input type="button" value="Delete"/>			
No.	Port	Source IP	Subnet Mask
1	GIGA1	172.16.100.77	255.255.255.0
2	ADSL Port1-PVC1	172.16.100.66	255.255.0.0
<input type="text" value="ADSL"/> <input type="text" value="Port-1"/> <input type="text" value="PVC-1"/>			
Next No: <input type="text" value="3"/>			
Source IP <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> MASK <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/>			
<input type="button" value="Create"/>			
[ <a href="#">GIGA BRIDGE</a>   <a href="#">ADSL BRIDGE</a>   <a href="#">STATIC VLAN</a> ]			

### Source IP Address Filtering Setup

Label	Description
<b>Filtering Type</b>	You can also select the filtering type here.
<b>No. From...To...</b>	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
<b>Query</b>	Once you have specified the serial number, click on this button to display the filter rules.
<b>Delete</b>	Once you have specified the serial number, click on this button to delete the filter rules in the table.
<input type="text" value="ADSL"/> <input type="text" value="Port-1"/> <input type="text" value="PVC-1"/>	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
<b>Source IP</b>	Type in the IP Address of the source.
<b>MASK</b>	Type in the subnet mask.
<b>Create</b>	Click on this button to create a new filter rule in the table.

## Layer 4 Destination Port Filtering

### Layer 4 Destination Port Filtering

Filtering Type	L4 Dest Port	No. From	1	To	1
No range from 1 to 256					
Query		Delete			
No.	Port	L4 Destination PORT			
1	ADSL Port1-PVC1	65535			
ADSL	Port-1	PVC-1			
Next No:	2	Destination Port	65535	Create	
[ GIGA BRIDGE   ADSL BRIDGE   STATIC VLAN ]					

### Layer 4 Destination Port Filtering Setup

Label	Description
<b>Filtering Type</b>	You can also select the filtering type here.
<b>No. From...To...</b>	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
<b>Query</b>	Once you have specified the serial number, click on this button to display the filter rules.
<b>Delete</b>	Once you have specified the serial number, click on this button to delete the filter rules in the table.
ADSL Port-1 PVC-1	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
<b>Destination Port</b>	Type in the Destination Port number (1 ~ 65535).
<b>Create</b>	Click on this button to create a new filter rule in the table.

## Destination IP Filtering

### Destination IP Filtering

Filtering Type: <input type="text" value="Destination IP"/> No. From: <input type="text" value="1"/> To: <input type="text" value="1"/>			
No range from 1 to 256			
<input type="button" value="Query"/>		<input type="button" value="Delete"/>	
No.	Port	Destination IP	Subnet Mask
1	ADSL Port2-PVC1	172.16.100.25	255.255.0.0
<input type="text" value="ADSL"/> <input type="text" value="Port-1"/> <input type="text" value="PVC-1"/>			
Next No: <input type="text" value="2"/>			
Destination IP		MASK	
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
<input type="button" value="Create"/>			
[ <a href="#">GIGA BRIDGE</a>   <a href="#">ADSL BRIDGE</a>   <a href="#">STATIC VLAN</a> ]			

### Destination IP Filtering Setup

Label	Description
<b>Filtering Type</b>	You can also select the filtering type here.
<b>No. From...To...</b>	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
<b>Query</b>	Once you have specified the serial number, click on this button to display the filter rules.
<b>Delete</b>	Once you have specified the serial number, click on this button to delete the filter rules in the table.
<input type="text" value="ADSL"/> <input type="text" value="Port-1"/> <input type="text" value="PVC-1"/>	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
<b>Destination IP</b>	Type in the Destination IP address.
<b>MASK</b>	Type in the subnet mask.
<b>Create</b>	Click on this button to create a new filter rule in the table.



## Destination MAC Filtering

### Destination MAC Filtering

Filtering Type	Destination MAC	No. From	1	To	5
No range from 1 to 256					
<input type="button" value="Query"/> <input type="button" value="Delete"/>					
No.	Port	Destination MAC			
1	ADSL Port1-PVC1	11:22:33:44:55:66			
<input type="button" value="ADSL"/> <input type="button" value="Port-1"/> <input type="button" value="PVC-1"/>					
Next No: 2					
Destination MAC <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/>					
<input type="button" value="Create"/>					
<a href="#">[ GIGA BRIDGE   ADSL BRIDGE   STATIC VLAN ]</a>					

### Destination MAC Filtering Setup

Label	Description
<b>Filtering Type</b>	You can also select the filtering type here.
<b>No. From...To...</b>	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
<b>Query</b>	Once you have specified the serial number, click on this button to display the filter rules.
<b>Delete</b>	Once you have specified the serial number, click on this button to delete the filter rules in the table.
<input type="button" value="ADSL"/> <input type="button" value="Port-1"/> <input type="button" value="PVC-1"/>	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
<b>Destination MAC</b>	Type in the Destination MAC address.
<b>Create</b>	Click on this button to create a new filter rule in the table.

## Ether Type Filtering

### Ether Type Filtering

Filtering Type	<input type="text" value="Ether Type"/>	No. From	<input type="text" value="1"/>	To	<input type="text" value="5"/>
No range from 1 to 256					
<input type="button" value="Query"/>		<input type="button" value="Delete"/>			
No.	Port	Ether Type			
1	ADSL Port1-PVC1	0x8100			
2	ADSL Port2-PVC1	0x8035			
<input type="text" value="ADSL"/>		<input type="text" value="Port-1"/>	<input type="text" value="PVC-1"/>		
Next No:	<input type="text" value="3"/>	Incoming EtherType	<input type="text" value="0x"/>	<input type="button" value="Create"/>	
[ <a href="#">GIGA BRIDGE</a>   <a href="#">ADSL BRIDGE</a>   <a href="#">STATIC VLAN</a> ]					

### Ether Type Filtering Setup

Label	Description
<b>Filtering Type</b>	You can also select the filtering type here.
<b>No. From...To...</b>	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
<b>Query</b>	Once you have specified the serial number, click on this button to display the filter rules.
<b>Delete</b>	Once you have specified the serial number, click on this button to delete the filter rules in the table.
<input type="text" value="ADSL"/> <input type="text" value="Port-1"/> <input type="text" value="PVC-1"/>	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
<b>Incoming Ether Type</b>	Type in the EtherType value (hexadecimal).
<b>Create</b>	Click on this button to create a new filter rule in the table.

### 4.3.3.2 VLAN Priority Remark

This option allows you to configure the VLAN priority. From the *Bridge* menu, click on *Access Control* and then *VLAN Priority Remark*. The following page is displayed:

VLAN Priority Remark

---

VPRI Remark [Select]

VLAN Priority Remark Table
(1) Type of Service(TOS) Remark
(2) IP Source Remark
(3) IP Destination Remark
(4) MAC Source Remark
(5) MAC Destination Remark
(6) VLAN ID Remark
(7) VLAN Priority Regen(Re-Generation)
(8) Differentiated Services (DSCP)
(9) Protocol Remark
(10) Ether Type Remark

[ [GIGA BRIDGE](#) | [ADSL BRIDGE](#) | [STATIC VLAN](#) ]

Click on the *VPRI Remark* drop-down list and select a type of VLAN Priority Remark. Available options include Type of Service (TOS), IP Source, IP Destination, MAC Source, MAC Destination, VLAN ID, VLAN Priority Regeneration, Differentiated Services (DSCP), Protocol, and Ether Type.

## TOS

### VLAN TOS Priority Remark

VPRI Remark (1)TOS <input type="text"/> No. From <input type="text" value="1"/> To <input type="text" value="1"/>			
No range from 1 to 256			
<input type="button" value="Query"/> <input type="button" value="Delete"/>			
No.	Port	Incoming TOS	Outgoing Vlan Priority
1	ADSL Port1-PVC1	1	3
<input type="text" value="ADSL"/> <input type="text" value="Port-1"/> <input type="text" value="PVC-1"/>			
Next No: <input type="text" value="2"/>			
TOS <input type="text" value="0"/>			
Priority(Out) <input type="text" value="0"/> <input type="button" value="Create"/>			
<a href="#">[ GIGA BRIDGE   ADSL BRIDGE   STATIC VLAN ]</a>			

### VLAN Priority Remark Setup - TOS

Label	Description
VPRI Remark	You can also select the priority remark type here.
No. From ...To...	Type in the range of entry number in the table you want to view (value range is 1~256).
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
<input type="text" value="ADSL"/> <input type="text" value="Port-1"/> <input type="text" value="PVC-1"/>	Click on these drop-down list to select an ADSL bridge port or GIGA bridge port.
TOS	<p>In order to provide basic support for classes of service to the Internet Protocol. The IP protocol header contains what is known as the ToS (Type of Service) bits.</p> <p>Click on the drop-down list and select incoming TOS (value range 0 ~ 7), then you can create the mapping between TOS and VLAN priority.</p>
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create a new entry in the table.

## IP Source

### VLAN IP Source Priority Remark

VPRI Remark (2) IP Source <input type="button" value="No. From 1 To 1"/>				
No range from 1 to 256				
<input type="button" value="Query"/> <input type="button" value="Delete"/>				
No.	Port	IP Source ADDRESS	Subnet Mask	Outgoing Vlan Priority
1	ADSL Port1-PVC1	172.113.006.000	255.255.000.000	2
<input type="button" value="ADSL"/> <input type="button" value="Port-1"/> <input type="button" value="PVC-1"/>				
Next No: 2				
Source IP <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> MASK <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/>				
Priority(Out) <input type="text" value="0"/> <input type="button" value="Create"/>				
<a href="#">[ GIGA BRIDGE   ADSL BRIDGE   STATIC VLAN ]</a>				

### VLAN Priority Remark Setup – IP Source

Label	Description
<b>VPRI Remark</b>	You can also select the priority remark type here.
<b>No. From ...To...</b>	Type in the range of entry number in the table you want to view (value range is 1~256).
<b>Query</b>	To query entries, type in the entry number range and then click on this button to retrieve.
<b>Delete</b>	To delete entries, type in the entry number range and then click on this button to delete.
<input type="button" value="ADSL"/> <input type="button" value="Port-1"/> <input type="button" value="PVC-1"/>	Click on these drop-down list to select an ADSL bridge port or GIGA bridge port.
<b>Source IP</b>	Type in the IP address of the coming source.
<b>MASK</b>	Type in the subnet mask.
<b>Priority (Out)</b>	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
<b>Create</b>	Click on this button to create a new entry in the table.

## IP Destination

### VLAN IP Destination Priority Remark

VPRI Remark: (3)IP Destination <input type="button" value="No. From"/> 1 <input type="button" value="To"/> 1 No range from 1 to 256 <input type="button" value="Query"/> <input type="button" value="Delete"/>				
No.	Port	IP Destination ADDRESS	Subnet Mask	Outgoing Vlan Priority
1	GIGA1	172.023.002.002	255.255.000.000	7
<input type="button" value="GIGA"/> <input type="button" value="GIGA1"/>				
Next No: 2 Destination IP: <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> MASK: <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> Priority(Out): <input type="button" value="0"/> <input type="button" value="Create"/>				
<a href="#">[ GIGA BRIDGE   XDSL BRIDGE   STATIC VLAN ]</a>				

### VLAN Priority Remark Setup – IP Destination

Label	Description
<b>VPRI Remark</b>	You can also select the priority remark type here.
<b>No. From ...To...</b>	Type in the range of entry number in the table you want to view (value range is 1~256).
<b>Query</b>	To query entries, type in the entry number range and then click on this button to retrieve.
<b>Delete</b>	To delete entries, type in the entry number range and then click on this button to delete.
<input type="button" value="GIGA"/> <input type="button" value="GIGA1"/>	Click on these drop-down list to select an ADSL bridge port or GIGA bridge port.
<b>Source IP</b>	Type in the IP address of the coming source.
<b>MASK</b>	Type in the subnet mask.
<b>Priority (Out)</b>	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
<b>Create</b>	Click on this button to create a new entry in the table.

## MAC Source

### VLAN MAC Source Priority Remark

VPRI Remark: (4)MAC Source    No. From: 1    To: 1 No range from 1 to 256 <input type="button" value="Query"/> <input type="button" value="Delete"/>			
No.	Port	MAC Source ADDRESS	Outgoing Vlan Priority
1	GIGA1	00:30:4f:aa:01:c0	1
<input type="text" value="GIGA"/> <input type="text" value="GIGA1"/>			
Next No: 2 Source MAC: <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/>			
Priority(Out): <input type="text" value="0"/> <input type="button" value="Create"/>			
<a href="#">[ GIGA BRIDGE   XDSL BRIDGE   STATIC VLAN ]</a>			

### VLAN Priority Remark Setup – MAC Source

Label	Description
<b>VPRI Remark</b>	You can also select the priority remark type here.
<b>No. From ...To...</b>	Type in the range of entry number in the table you want to view (value range is 1~256).
<b>Query</b>	To query entries, type in the entry number range and then click on this button to retrieve.
<b>Delete</b>	To delete entries, type in the entry number range and then click on this button to delete.
<input type="text" value="GIGA"/> <input type="text" value="GIGA1"/>	Click on these drop-down list to select an ADSL bridge port or GIGA bridge port.
<b>Source MAC</b>	Type in the MAC Address of the coming source.
<b>Priority (Out)</b>	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
<b>Create</b>	Click on this button to create a new entry in the table.

## MAC Destination

### VLAN MAC Destination Priority Remark

VPRI Remark: (5)MAC Destination <input type="button" value="Query"/> <input type="button" value="Delete"/>			
No. From: 1 To: 1 No range from 1 to 256			
No.	Port	MAC Destination ADDRESS	Outgoing Vlan Priority
1	GIGA1	00:30:4f:aa:01:c0	7
<input type="button" value="GIGA"/> <input type="button" value="GIGA1"/>			
Next No: 2 Destination MAC: <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/> <input type="text" value="00"/>			
Priority(Out): <input type="button" value="0"/> <input type="button" value="Create"/>			
<a href="#">[ GIGA BRIDGE   XDSL BRIDGE   STATIC VLAN ]</a>			

### VLAN Priority Remark Setup – MAC Destination

Label	Description
<b>VPRI Remark</b>	You can also select the priority remark type here.
<b>No. From ...To...</b>	Type in the range of entry number in the table you want to view (value range is 1~256).
<b>Query</b>	To query entries, type in the entry number range and then click on this button to retrieve.
<b>Delete</b>	To delete entries, type in the entry number range and then click on this button to delete.
<input type="button" value="GIGA"/> <input type="button" value="GIGA1"/>	Click on these drop-down list to select an ADSL bridge port or GIGA bridge port.
<b>Destination MAC</b>	Type in the MAC Address of the destination.
<b>Priority (Out)</b>	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
<b>Create</b>	Click on this button to create a new entry in the table.



## VLAN ID

### VLAN ID Priority Remark

VPRI Remark: (6))VLAN ID <input type="button" value="▼"/> No. From <input type="text" value="1"/> To <input type="text" value="2"/> No range from 1 to 256 <input type="button" value="Query"/> <input type="button" value="Delete"/>			
No.	Port	VLAN ID	Outgoing Vlan Priority
1	GIGA1	1	2
2	GIGA1	5	0
<input type="button" value="GIGA"/> <input type="button" value="GIGA1"/>			
Next No: <input type="text" value="3"/> VLAN ID: <input type="text" value="1"/> Priority(Out): <input type="button" value="0"/> <input type="button" value="Create"/>			
<a href="#">[ GIGA BRIDGE   XDSL BRIDGE   STATIC VLAN ]</a>			

### VLAN Priority Remark Setup – VLAN ID

Label	Description
<b>VPRI Remark</b>	You can also select the priority remark type here.
<b>No. From ...To...</b>	Type in the range of entry number in the table you want to view (value range is 1~256).
<b>Query</b>	To query entries, type in the entry number range and then click on this button to retrieve.
<b>Delete</b>	To delete entries, type in the entry number range and then click on this button to delete.
<input type="button" value="GIGA"/> <input type="button" value="GIGA1"/>	Click on these drop-down list to select an ADSL bridge port or GIGA bridge port.
<b>VLAN ID</b>	Type in the VLAN ID (1 ~ 4094).
<b>Priority (Out)</b>	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
<b>Create</b>	Click on this button to create a new entry in the table.

## VLAN Priority Regeneration

### VLAN Priority Re-Generation

VPRI Remark (7)VLAN Priority Regen No. From 1 To 2  
 No range from 1 to 1024  
 Query Delete

No.	Port	Incoming Vlan Priority	Outgoing Vlan Priority
1	GIGA1	0	3
2	GIGA1	2	5

GIGA GIGA1

Next No: 3  
 Priority(In) 0  
 Priority(Out) 0 Create

[ GIGA BRIDGE | XDSL BRIDGE | STATIC VLAN ]

### VLAN Priority Remark Setup – VLAN Priority Regeneration

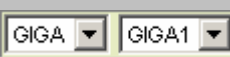
Label	Description
<b>VPRI Remark</b>	You can also select the priority remark type here.
<b>No. From ...To...</b>	Type in the range of entry number in the table you want to view (value range is 1~256).
<b>Query</b>	To query entries, type in the entry number range and then click on this button to retrieve.
<b>Delete</b>	To delete entries, type in the entry number range and then click on this button to delete.
GIGA GIGA1	Click on these drop-down list to select an ADSL bridge port or GIGA bridge port.
<b>Priority (In)</b>	Click on the drop-down list and select the incoming VLAN Priority (0 ~ 7).
<b>Priority (Out)</b>	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
<b>Create</b>	Click on this button to create a new entry in the table.

## Differentiated Services

### VLAN DSCP Priority Remark

VPRI Remark: (8)DiffServe <input type="button" value="Query"/> <input type="button" value="Delete"/>			
No. From: 1 To: 2 No range from 1 to 256			
No.	Port	Incoming DSCP	Outgoing Vlan Priority
1	GIGA1	DEFAULT	0
2	GIGA1	AF12 001100	1
GIGA <input type="button" value="GIGA1"/>			
Next No: 3 Incoming DS: (00)DEFAULT <input type="button" value="Create"/>			
Priority(Out): 0			
<a href="#">[ GIGA BRIDGE   XDSL BRIDGE   STATIC VLAN ]</a>			

### VLAN Priority Remark Setup – Differentiated Services

Label	Description														
<b>VPRI Remark</b>	You can also select the priority remark type here.														
<b>No. From ...To...</b>	Type in the range of entry number in the table you want to view (value range is 1~256).														
<b>Query</b>	To query entries, type in the entry number range and then click on this button to retrieve.														
<b>Delete</b>	To delete entries, type in the entry number range and then click on this button to delete.														
	Click on these drop-down list to select an ADSL bridge port or GIGA bridge port.														
<b>Incoming DS</b>	<p>Click on the drop-down list and select the incoming DSCP (Diffserv Code Points, which is a 6-bit number).</p> <p>The standardized combinations are listed below:</p> <table border="0"> <tr> <td>default</td> <td>Default value (bits:000000)</td> </tr> <tr> <td>af11</td> <td>Assured Forwarding Class 1:Low Drop (bits:001010)</td> </tr> <tr> <td>af12</td> <td>Assured Forwarding Class 1:Medium Drop (bits:001100)</td> </tr> <tr> <td>af13</td> <td>Assured Forwarding Class 1:High Drop (bits:001110)</td> </tr> <tr> <td>af21</td> <td>Assured Forwarding Class 2:Low Drop (bits:010010)</td> </tr> <tr> <td>af22</td> <td>Assured Forwarding Class 2:Medium Drop (bits:010100)</td> </tr> <tr> <td>af23</td> <td>Assured Forwarding Class 2:High Drop (bits:010110)</td> </tr> </table>	default	Default value (bits:000000)	af11	Assured Forwarding Class 1:Low Drop (bits:001010)	af12	Assured Forwarding Class 1:Medium Drop (bits:001100)	af13	Assured Forwarding Class 1:High Drop (bits:001110)	af21	Assured Forwarding Class 2:Low Drop (bits:010010)	af22	Assured Forwarding Class 2:Medium Drop (bits:010100)	af23	Assured Forwarding Class 2:High Drop (bits:010110)
default	Default value (bits:000000)														
af11	Assured Forwarding Class 1:Low Drop (bits:001010)														
af12	Assured Forwarding Class 1:Medium Drop (bits:001100)														
af13	Assured Forwarding Class 1:High Drop (bits:001110)														
af21	Assured Forwarding Class 2:Low Drop (bits:010010)														
af22	Assured Forwarding Class 2:Medium Drop (bits:010100)														
af23	Assured Forwarding Class 2:High Drop (bits:010110)														

	af31      Assured Forwarding Class 3:Low Drop (bits:011010) af32      Assured Forwarding Class 3:Medium Drop (bits:011100) af33      Assured Forwarding Class 3:High Drop (bits:011110) af41      Assured Forwarding Class 4:Low Drop (bits:100010) af42      Assured Forwarding Class 4:Medium Drop (bits:100100) af43      Assured Forwarding Class 4:High Drop (bits:100110) ef         Expedited Forwarding (bits:101110)
<b>Priority (Out)</b>	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
<b>Create</b>	Click on this button to create a new entry in the table.

## Protocol

### VLAN Protocol Priority Remark

VPRI Remark: (9) Protocol Remark  No. From: 1 To: 1  
 No range from 1 to 256

No.	Port	Incoming Protocol	Outgoing Vlan Priority
1	GIGA1	ICMP	0

GIGA  GIGA1

Next No: 2  
 Incoming Protocol: (01) ICMP   
 Priority(Out): 0

[ [GIGA BRIDGE](#) | [XDSL BRIDGE](#) | [STATIC VLAN](#) ]

### VLAN Priority Remark Setup – Protocol

Label	Description
<b>VPRI Remark</b>	You can also select the priority remark type here.
<b>No. From ...To...</b>	Type in the range of entry number in the table you want to view (value range is 1~256).
<b>Query</b>	To query entries, type in the entry number range and then click on this button to retrieve.
<b>Delete</b>	To delete entries, type in the entry number range and then click on this button to delete.
<input type="button" value="GIGA v"/> <input type="button" value="GIGA1 v"/>	Click on these drop-down list to select an ADSL bridge port or GIGA bridge port.
<b>Incoming Protocol</b>	Click on the drop-down list and select the incoming protocol.  Available options are:  ICMP, IGMP, IP in IP, TCP, GRP, IGP, UDP, GRE, IGRP, or OSPF.
<b>Priority (Out)</b>	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
<b>Create</b>	Click on this button to create a new entry in the table.

## Ether Type

### VLAN Priority Remark

VPRI Remark (10) Ether Type Remark  No. From 1 To 1

No range from 1 to 256

No.	Port	Incoming EtherType	Outgoing Vlan Priority
1	GIGA1	0x8100	0

GIGA  GIGA1

Next No: 2

Incoming EtherType 0x

Priority(Out)

[ [GIGA BRIDGE](#) | [XDSL BRIDGE](#) | [STATIC VLAN](#) ]

### VLAN Priority Remark Setup – Ether Type

Label	Description
<b>VPRI Remark</b>	You can also select the priority remark type here.
<b>No. From ...To...</b>	Type in the range of entry number in the table you want to view (value range is 1~256).
<b>Query</b>	To query entries, type in the entry number range and then click on this button to retrieve.
<b>Delete</b>	To delete entries, type in the entry number range and then click on this button to delete.
<input type="button" value="GIGA"/> <input type="button" value="GIGA1"/>	Click on these drop-down list to select an ADSL bridge port or GIGA bridge port.
<b>Incoming EtherType</b>	Type in the EtherType value (hexadecimal).
<b>Priority (Out)</b>	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
<b>Create</b>	Click on this button to create a new entry in the table.

### 4.3.3.3 Rate Limit

This option allows you to limit the rate of broadcast/multicast packets that are received on a VLAN, and configure the Three Color Marking (TCM) Policer profile. From the *Bridge* menu, click on *Access Control* and then *Rate Limit*. The following page is displayed. Click on the *Rate Limit Type* drop-down list and select the item you want to setup.

Rate Limit [Select]

---

Rate Limit Type [Select]

**Rate Limit Select Table**

(1) Broadcast
(2) Flooding(Multicast and Unknown MAC Address)
(3) Policer Profile
(4) Policer Binding Table
(5) Three Color Marking

#### ■ Rate Limit Broadcast

Rate Limit Broadcast

---

Rate Limit Type

Committed Information Rate  1536~1000000000(Bits/sec)

Leaky Bucket  1~1024 (Milli-sec)

**Rate Limit Broadcast Setup**

Label	Description
<b>Rate Limit Type</b>	Click on this drop-down list and select the item you want to setup.
<b>Committed Information Rate</b>	Committed Information Rate (1536 ~ 1G bits per second). The threshold rate to turn on the rate-limit mechanism.
<b>Leaky Bucket</b>	Leaky bucket size. The unit is millisecond. This parameter ranges from 1 to 1024. The bucket depth is the product of CIR and this parameter.
<b>Modify</b>	Click on this button to modify data in the table.
<b>Query</b>	Click on this button to get most recent status.

## ■ Rate Limit Flooding

### Rate Limit Flooding

Rate Limit Type: <input type="text" value="Flooding"/>		
Flooding VID: <input type="text" value="1"/>	Committed Information Rate: <input type="text" value="80000"/>	1536~1000000000(Bits/sec)
Leaky Bucket: <input type="text" value="40"/>	1~1024 (Milli-sec)	
<input type="button" value="Modify"/>	<input type="button" value="Query"/>	
Flooding VID: <input type="text" value="1"/>	<input type="button" value="Delete"/>	
<b>VID</b>	<b>Committed Information Rate (Bits/sec)</b>	<b>Leaky Bucket (Milli-sec)</b>

### Rate Limit Flooding Setup

Label	Description
<b>Rate Limit Type</b>	Click on this drop-down list and select the item you want to setup.
<b>Flooding VID</b>	Type in VLAN ID (1 ~ 4094). The VLAN must have been created in the static VLAN table.
<b>Committed Information Rate</b>	Committed Information Rate (1536 ~ 1G bits per second). The threshold rate to turn on the rate-limit mechanism.
<b>Leaky Bucket</b>	Leaky bucket size. The unit is millisecond. This parameter ranges from 1 to 1024. The bucket depth is the product of CIR and this parameter.
<b>Modify</b>	Click on this button to modify data in the table.
<b>Query</b>	Click on this button to get most recent status.
<b>Delete</b>	To delete a VID entry, type in the VID number and then click on this button to delete.



■ **Rate Limit Policer profile**

The IDL-2402 supports two kinds of TCM Policer: two-rate TCM (with dual leaky buckets) and single-rate TCM (with single leaky bucket).

The single-rate TCM meters a traffic stream and marks its packets according to Committed Information Rate (CIR) and Committed Burst Size (CBS) to be either green, or red. The single-rate TCM operates with a single leaky bucket that is updated according to only one rate, the committed information rate - CIR. A packet is marked green if the leaky bucket is not full and red otherwise.

The two-rate TCM meters a traffic stream and marks its packets based on two rates, Committed Information Rate (CIR) and Excess Information Rate (EIR), and their associated burst sizes, Committed Burst Size (CBS) and Excess Burst Size (EBS), to be either green, yellow, or red. The two-rate TCM operates with dual leaky bucket, where each bucket is updated according to a different rate. The first bucket is updated according to the CIR, the second bucket is updated according to the EIR. A packet is marked red if it exceeds the PIR. Otherwise it is marked either yellow or green depending on whether it exceeds or doesn't exceed the EIR.

Rate Limit Policer Profile

Rate Limit Type: Policer Profile								
Page (01) of 4 <input type="button" value="Modify"/> <input type="button" value="Delete"/> <input type="button" value="Query"/>								
CIR(Committed Info Rate),EIR(Excess Info Rate),LBS(Leaky Bucket Size) DLB(Dual Leaky Bucket),SLB(Single Leaky Bucket) CIR & 1st LBS are supported in both SLB and DLB mode EIR & 2nd LBS only in DLB mode								
Select	No	Share Mode	LB Mode	CIR (1536..1G bps)	EIR (1536..1G bps)	1st LBS (1..1K ms)	2nd LBS (1..1K ms)	Status
<input type="checkbox"/>	1	Share	Single	20000	--	50	--	Complete
<input checked="" type="checkbox"/>	2	NO Share	Dual	80000	80000	20	200	Complete
<input type="checkbox"/>	3	Select	Select					Non-Complete
<input type="checkbox"/>	4	Select	Select					Non-Complete
<input type="checkbox"/>	5	Select	Select					Non-Complete
<input type="checkbox"/>	6	Select	Select					Non-Complete
<input type="checkbox"/>	7	Select	Select					Non-Complete
<input type="checkbox"/>	8	Select	Select					Non-Complete
<input type="checkbox"/>	9	Select	Select					Non-Complete
<input type="checkbox"/>	10	Select	Select					Non-Complete
<input type="checkbox"/>	11	Select	Select					Non-Complete
<input type="checkbox"/>	12	Select	Select					Non-Complete

### Rate Limit Poicer Setup

Label	Description
<b>Rate Limit Type</b>	Click on this drop-down list and select the item you want to setup.
Page (01) of 4	Click on this drop-down list and select a page to be displayed.
<b>Select</b>	Select the checkbox when you want to create/modify/delete this entry.
<b>Share Mode</b>	<p><b>Share</b> mode: All the bridge ports which bind to the share mode policer profile will share the same Leaky Bucket defined by the CIR, EIR...parameters. So in Share mode, system only creates one Leaky Bucket for all the binding bridge ports.</p> <p><b>No Share</b> mode:</p> <p>Every bridge port which bind to the non-share policer profile will have its own Leaky Bucket.</p>
<b>LB Mode</b>	<p><b>Single:</b> Single Leaky Bucket. For SLB, there is one controlling parameter: CIR.</p> <p><b>Dual:</b> Dual Leaky Bucket. For DLB, there are two controlling parameters: CIR and EIR.</p>
<b>CIR</b>	Committed Information Rate (1536 ~ 1G bits per second) controls the number of tokens in the first bucket (CBS bucket).
<b>EIR</b>	Excess Information Rate (1536 ~ 1G bits per second) controls the number of tokens in the second bucket (EBS bucket).
<b>1<sup>st</sup> LBS</b>	1 <sup>st</sup> Leaky Bucket Size. The unit is millisecond. This parameter ranges from 1 to 1024. The first bucket depth is the product of CIR and this parameter.
<b>2<sup>nd</sup> LBS</b>	2 <sup>nd</sup> Leaky Bucket Size. The unit is millisecond. This parameter ranges from 1 to 1024. The second bucket depth is the product of EIR and this parameter.
<b>Modify</b>	Click on this button to modify an entry in the rate limit table.
<b>Query</b>	Click on this button to retrieve the entries in the table.
<b>Delete</b>	Click on this button to delete the entries in the table.

## ■ Rate Limit Policer Binding Table

The Rate Limit Policer Binding Table allows you to specify which Policer profile to bind and the binding status for a trunk or line bridge port.

Rate Limit Policer Binding Table

Rate Limit Type <span>Policer Binding Table</span> ▼			
<span>GIGA</span> ▼ <span>Modify</span> <span>Query</span>			
<b>Select</b>	<b>Port</b>	<b>Policer No.</b>	<b>Binding Status</b>
<input checked="" type="checkbox"/>	GIGA1	▼	<span>OFF</span> ▼

### Rate Limit Policer Binding Setup

Label	Description
<b>Rate Limit Type</b>	Click on this drop-down list and select the item you want to setup.
<span>GIGA</span> ▼	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
<b>Modify</b>	Once you have finished setting the parameter values, click on this button to submit the modification.
<b>Query</b>	Click on this button to get most recent data.
<b>Select</b>	Remember to select the checkbox when you want to modify this entry.
<b>Policer No.</b>	Click on the drop-down list and select the Policer profile you want to bind with this port.
<b>Binding Status</b>	Select to bind (ON) or unbind (OFF) the Policer profile.

## ■ Three Color Marking Policer

The IDL-2402 supports TCM Policer in accordance with the Metro Ethernet Forum (MEF) Bandwidth Profile and RFCs 2697 & 2698. Our TCM Policer supports both Color Aware and Color Blind modes. The “color” is used for determining whether a packet will proceed to the policer when TCM Policer works in Color Aware mode; also in the policer the packet may be remarked with new color according to the packet’s conformance to the policer rules. A packet is considered green when it enters the TCM Policer only if its input color field, VLAN priority bits or DSCP field, has the same value with the green value configured in this page (see the following figure and parameter description). Likewise, a packet is considered yellow only if its input color field has the same value with the yellow value configured in this page. All other values are considered red.

Once a packet has passed through the TCM Policer, it will be directed to the class queues for scheduling.

### Rate Limit Three Color Marking

Rate Limit Type: Three Color Marking					
If the Color Field is VLAN Priority mode then the Colors Value are 0..7 If the Color Field is DSCP mode then the Colors Value range are 0..63					
<input type="button" value="Modify"/> <input type="button" value="Query"/>					
Color Aware	Color Field	Packet Mode	Green Value	Yellow Value	Red Value
Aware	(1)VLAN Priority	TAG	1	3	7

### Rate Limit Policer Binding Setup

Label	Description
<b>Rate Limit Type</b>	Click on this drop-down list and select the item you want to setup.
<b>Modify</b>	Once you have finished setting the parameter values, click on this button to submit the modification.
<b>Query</b>	Click on this button to get most recent data.
<b>Color Aware</b>	<p><b>Color aware</b> mode: the packets are classified before they’re sent through the policer.</p> <p><b>Color blind</b> mode: the packets are directed through the entire policer regardless of their color.</p>
<b>Color Field</b>	There are two fields you can select for determining the packet’s input color: the VLAN priority bits within the Ethernet header or the DSCP field within the IP header.
<b>Packet Mode</b>	This parameter defines the action for non-conforming packets. You can choose Tag or Discard. If Tag is chosen, then all the packets will be marked as red in the Color field rather than be discarded.

<b>Green Value</b>	Type in the green color value that is used when determining a packet's input color (for Color Aware mode) or remarking a packet's output color as green. Valid value is 0 ~ 7 for VLAN Priority color field or 0 ~ 63 for DSCP color field.
<b>Yellow Value</b>	Type in the yellow color value that is used when determining a packet's input color (for Color Aware mode) or remarking a packet's output color as yellow. Valid value is 0 ~ 7 for VLAN Priority color field or 0 ~ 63 for DSCP color field.
<b>Red Value</b>	Type in the red color value that is used when remarking a packet's output color as red. Valid value is 0 ~ 7 for VLAN Priority color field or 0 ~ 63 for DSCP color field.

### 4.3.3.4 Priority Queue Mapping

This web page is used to select SPQ/WFQ/WRR queuing mechanism and to setup the mapping between VLAN priority levels and system internal queues. From the *Bridge* menu, click on *Access Control* and then *Priority Queue Mapping*. The following page is displayed:

Priority Queue Mapping

Modify		Query					
Weighted range from 1..255							
<b>GIGA Queue Scheduling</b>	<b>ATM Queue Scheduling</b>	<b>Queue#3 Weighted</b>	<b>Queue#2 Weighted</b>	<b>Queue#1 Weighted</b>	<b>Queue#0</b>		
SPQ	SPQ	40	30	20	10		
<b>GIGA Priority#7</b>	<b>GIGA Priority#6</b>	<b>GIGA Priority#5</b>	<b>GIGA Priority#4</b>	<b>GIGA Priority#3</b>	<b>GIGA Priority#2</b>	<b>GIGA Priority#1</b>	<b>GIGA Priority#0</b>
Queue#3	Queue#3	Queue#2	Queue#2	Queue#1	Queue#1	Queue#0	Queue#0
<b>ATM Priority#7</b>	<b>ATM Priority#6</b>	<b>ATM Priority#5</b>	<b>ATM Priority#4</b>	<b>ATM Priority#3</b>	<b>ATM Priority#2</b>	<b>ATM Priority#1</b>	<b>ATM Priority#0</b>
Queue#7	Queue#6	Queue#5	Queue#4	Queue#3	Queue#2	Queue#0	Queue#1

The queues for Giga and ATM interfaces are different.

#### Giga:

The Giga interface has 4 Queues and these queues can only work on Strict Priority Queuing (SPQ) scheduling. The priorities of these queues are: Q3 > Q2 > Q1 > Q0.

#### ATM:

Each ATM PVC bridge interface on each ADSL port has 8 Queues and can work in SPQ or SPQ/WFQ mix mode.

For SPQ, the priorities of these queues are: Q7 > Q6 > Q5 > Q4 > Q3 > Q2 > Q1 > Q0. For SPQ/WFQ mixed, the priority of SPQ queues (Q7~Q4) is higher than WFQ queues (Q3~Q0).

And:

Q7 ~ Q4 are for SPQ and the priorities are Q7 > Q6 > Q5 > Q4.

Q3 ~ Q0 are for WFQ (Weighted Fair Queuing) and you can define the weight value for Q3 ~ Q0.

Note that if each queue has different weight value, the system will work as WFQ mode. If all queues have the same weight value, the system will work as Weighted Round Robin (WRR) mode.

The system allows 8 priority levels fully work as WFQ or WRR mode, via using queues of Q3 ~ Q0 only in the Priority Queue Mapping table.

## 4.3.4 Forwarding

### 4.3.4.1 TP Forwarding DB

This option allows you to retrieve the status of the transparent forwarding database. The forwarding table will reveal the information of MAC addresses that are learned or statically configured on a specific bridge port. From the *Bridge* menu, click on *Forwarding* and then *TP Forwarding DB*. The following page is displayed.

Forward Table

---

Aging Time(10..1000000 Sec):		<input type="text" value="300"/>	<input type="button" value="Modify"/>					
No. From	<input type="text" value="1"/>	To	<input type="text" value="15"/>					
No range from 1 to 6144		<input type="button" value="Query"/>						
No.	Source MAC	IFC	Port	Status	VID	Aging Bit	Process Mode	Unknown Mac Mode
1	02:11:22:33:44:AA	1	Giga:1	Dynamic	100	True	PASS	Disabled
2	66:00:00:00:00:33	4	Port-PVC:1-1	Static	1	False	PASS	Disabled

#### TP Forwarding DB

Label	Description
<b>Aging Time</b>	Type in the aging time in seconds. An entry will be removed from the FDB (aged-out) if the device does not transmit for a specified period of time (the aging time).
<b>Modify</b>	Click on this button to submit the modification of Aging Time.
<b>No. From...To...</b>	Select the range of entry number in the forwarding database to be displayed.
<b>Query</b>	Once you have selected the entry number, click on this button to get most recent status of MAC addresses forwarding.

### 4.3.4.2 Forwarding Static

This option allows you to configure the static MAC address forwarding entries on a specific bridge port. The setting of static MAC address takes effect on egress direction of bridge port. From the *Bridge* menu, click on *Forwarding* and then *Forwarding Static*. The following page is displayed.

Forwarding Static

---

No. From  To   
 No. range form 1 to 512

No.	Destination MAC	Output Port	VID	Process mode
2	ee:00:ff:00:00:33	GIGA1	1	PASS

GIGA  GIGA1

Next No:   
 Source MAC        
 VID:  Process:

#### Forwarding Static

Label	Description
<b>No. From...To...</b>	Select the range of entry number in the FDB to be retrieved. Valid number value: 1 ~ 512.
<b>Query</b>	Click on this button to display the static MAC forwarding entries.
<b>Delete</b>	Delete the entries according to the entry number range you type in.
<input type="button" value="GIGA"/> <input type="button" value="v"/> <input type="button" value="GIGA1"/> <input type="button" value="v"/>	Click on these drop-down list to select a bridge port (ADSL bridge port or GIGA bridge port) where the static forwarding entries to be configured.
<b>Source MAC</b>	Type in the MAC address for the static entry.
<b>VID</b>	Type in the VID for the static entry (1 ~ 4094).
<b>Process</b>	Click on the drop-down list and select "Deny" or "Pass".  "Pass" means to forward the packets with destination MAC address matching one of the static forwarding MAC addresses to a specified output bridge port.  "Deny" means to drop the packets.
<b>Create</b>	Click on this button to create a new entry.



## 4.3.5 Relay

### 4.3.5.1 DSL Line Identify

This option allows you to configure the DHCP option and PPPoE relay function. From the *Bridge* menu, click on *Relay* and then *DSL Line Identify*. The following page is displayed:

#### DSL Line Identify


**DSL Global Configuration**  
 PPP Service Name:  PPP Service Name Check mode: Disabled   
 DSLAM Name:  DSLAM Name mode: Customer   
 Dhcp Mode: Relay OFF  ID Select: Circuit ID   
 Circuit ID Type: DEFAULT  Remote ID Type: DEFAULT

**DSL Line ID Configuration**  
Port 01~12  PVC-1

Select	Port	Circuit ID	Remote ID	Trusted
<input type="checkbox"/>	01	IPDSLAM:001:000:00035	IPDSLAM:001/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	02	IPDSLAM:002:000:00035	IPDSLAM:002/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	03	IPDSLAM:003:000:00035	IPDSLAM:003/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	04	IPDSLAM:004:000:00035	IPDSLAM:004/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	05	IPDSLAM:005:000:00035	IPDSLAM:005/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	06	IPDSLAM:006:000:00035	IPDSLAM:006/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	07	IPDSLAM:007:000:00035	IPDSLAM:007/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	08	IPDSLAM:008:000:00035	IPDSLAM:008/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	09	IPDSLAM:009:000:00035	IPDSLAM:009/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	10	IPDSLAM:010:000:00035	IPDSLAM:010/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	11	IPDSLAM:011:000:00035	IPDSLAM:011/1	<span>FALSE</span> <input type="button" value="v"/>
<input type="checkbox"/>	12	IPDSLAM:012:000:00035	IPDSLAM:012/1	<span>FALSE</span> <input type="button" value="v"/>

#### DSL Line Identify Setup

Label	Description
<b>DSL Global Configuration</b>	
<b>PPP Service Name</b>	Type in the PPPoE service name to add.
<b>PPP Service Name Check mode</b>	Enable: the system will check whether the PPPoE service names from the PPPoE server and client are the same. If not the same, the PPP connection between server and client will not be established.  Disable: the system will not check the PPPoE service name.
<b>DSLAM Name</b>	Type in name of the DSLAM when DSLAM Name mode is set to 'Customer'.

<b>DSLAM Name mode:</b>	Select the DSLAM name to be customer-defined or cluster name (Domain name:NE name).
<b>DHCP Mode</b>	Click on this drop-down list and select OFF/ON to disable/enable DHCP relay function.
<b>ID Select</b>	Click on this drop-down list and select the Relay Agent Information that is inserted to the forwarding packets. Options are: Circuit ID, Remote ID, or Both.
<b>Circuit ID Type</b>	Click on this drop-down list and select the type of Circuit ID. Options are: DEFAULT, CUSTOMER. DEFAULT means our system-defined default type (<DSLAM name>:<circuit number>:<vpi>:<vci>); CUSTOMER means the customer-defined type.
<b>Remote ID Type</b>	<p>Click on this drop-down list and select the format of Remote ID. Options are: DEFAULT, Line ID (ADSL line identifier), Line Desc (description for the line), Line Phone (phone number), CUSTOMER.</p> <p><b>DEFAULT</b> means our system default format, which is DSLAM name:port_id/bridge_id. <b>CUSTOMER</b> means the customer-defined format; customer can type in any word not exceeding 48 characters.</p> <p>For <b>Line ID</b>, the format is port_id/bridge_id:Port Identifier.</p> <p>For <b>Line Desc</b>, the format is port_id/bridge_id:Port Description.</p> <p>For <b>Line Phone</b>, the format is port_id/bridge_id:Port Phone Number. The Port Identifier, Description, and Phone Number are set in the ADSL line information table (refer to section 4.4.3).</p>
<b>Set</b>	Once you have changed the setting of any one of the parameters (DHCP Mode, ID Select, CKT Type, Remote Type, DLSAM Name, Service Name), remember to click on Set to submit the modification.
<b>DSL Line ID Configuration</b>	
	Click on these drop-down lists to select the bridge ports to be displayed (these bridge ports must have been created in previous web page).
<b>Query</b>	Click on this button to display table.
<b>Modify</b>	Click on this button to submit the modification of DSL line identify table.
<b>Select Port</b>	Bridge port index. Select the checkbox(s) corresponding to the circuit(s) of which you want to modify the setting.
<b>Circuit ID</b>	Type in the Circuit ID when CUSTOMER is selected for the CKT Type.
<b>Remote ID</b>	Type in the Remote ID when CUSTOMER is selected for the Remote Type.
<b>Trusted</b>	Click on this drop-down list and specify the circuit to be trusted (TRUE), or untrusted (FALSE; the relay agent will discard the DHCP packets from an untrusted circuit).

## 4.3.6 IGMP

### 4.3.6.1 Protocol & Router Port

This option allows you to setup the IGMP protocol and router port. From the *Bridge* menu, click on *IGMP* and then *Protocol & Router Port*. The following page is displayed:

#### IGMP Protocol & Router Port

**IGMP Protocol Settings**

All of the interval from 1 to 500  
 Query(Query Interval),URI(Unsolicited Report Interval),BC(Older host present interval)  
 MRT(Max Response Time),LMQT(Last Member Query Time),GMT(Group Membership Time) readonly

IGMP Version	IGMP Mode	IGMP ACL Mode	Deny NO Alert	Max Groups Limit
IGMP V2	Snooping	Disabled	Disabled	Disabled

Query	URI	BC	MRT	LMQT	GMT
125	1	400	10	1	260

**Router Port Settings**

GIGA1  Router Port VID:  Router IP:

The IGMP Router's IP is available while IGMP in Proxy mode.  
 "0.0.0.0" means an operator is needless IGMP Router's IP.

Delete Select	VID	Router Port	Router IP
<input type="checkbox"/>	1	GIGA 1	172.002.002.002

#### IGMP Router Port Setup

Label	Description
<b>Modify</b>	Click on this button to modify the IGMP configuration once you have set new values for the parameters.
<b>IGMP Version</b>	Select the IGMP version. Options are: IGMP OFF, IGMP V1, IGMP V2, and IGMP V3.
<b>IGMP Mode</b>	Select the IGMP mode. Options are: Snooping and Proxy.
<b>IGMP ACL Mode</b>	Disable or enable ACL mode. IGMP ACL profile (refer to section 4.3.6) will be effective only when ACL mode is enabled.
<b>Deny No Alert</b>	Enabled: the system will deny IGMP packets that have no router alert option in their IP header. Disabled: default value; the system will not care router alert option.
<b>Max Groups Limit</b>	Enabled: the system will limit the maximum active counter of IGMP groups can be joined (concurrently) for every bridge port. Disabled: the system will not limit the counter of IGMP groups can be joined for the bridge port.

<b>Query 1~500(s)</b>	The Query Interval is the interval between General Queries sent by the Querier. By varying this value, an administrator may tune the number of IGMP messages on the network; larger values cause IGMP Queries to be sent less often. Value range is 1 ~ 500. Default is 125 seconds.
<b>URI 1~500(s)</b>	The Unsolicited Report Interval is the time between repetitions of a host's initial report of membership in a group. Value range is 1 ~ 500. Default: 1 second.
<b>BC 1~500(s)</b>	The Older Host Present Interval. It represents how long a host must wait after hearing a Version 1 Query before it may send any IGMPv2 messages. Default is 400 (sec).
<b>MRT 1~500(s)</b>	The burstiness of IGMP traffic is inversely proportional to the Max Response Time. A longer Max Response Time will spread Report messages over a longer interval. However, a longer Max Response Time in Group-Specific and Source-and-Group- Specific Queries extends the leave latency. (The leave latency is the time between when the last member stops listening to a source or group and when the traffic stops flowing.). Value range is 1 ~ 500. Default is 10.
<b>LMQT 1~500(s)</b>	The Last Member Query Interval is the Max Response Time used to calculate the Max Resp Code inserted into Group- Specific Queries sent in response to Leave Group messages. It is also the Max Response Time used in calculating the Max Resp Code for Group-and-Source-Specific Query messages. Value range is 1 ~ 500. Default is 1.
<b>GMT 1~500(s)</b>	Read-only value. The Group Membership Interval is the amount of time that must pass before a multicast router decides there are no more members of a group or a particular source on a network.  This value MUST be ((the Robustness Variable) times (the Query Interval)) plus (one Query Response Interval).
<b>GIGA1</b>	Click on this radio button to select GBE
<b>Route Port VID</b>	Type in the VID you want to setup/delete the router port for.  Valid VID value is 1 ~ 4094.
<b>Router IP</b>	Type in IGMP router IP address. When working in IGMP proxy mode, DSLAM will send IGMP general query whose source IP address is 0.0.0.0. But PCs with Windows OS do not receive this kind of packets. So user can assign an IP address here for proxy mode IGMP general query packet reference.
<b>Create</b>	Click on this button to create a new entry.
<b>Delete</b>	To delete an entry, select the checkbox of the entry and then click on Delete button.

### 4.3.6.2 IGMP Profile

This option allows you to configure the IGMP ACL (Access Control List) profile. This profile defines the IGMP multicast channels, which are allowed to join for each ADSL port. That is, a multicast stream will be copied to an ADSL port only if that multicast stream is registered in the ACL profile that is bound to this ADSL port. The maximum number of IGMP multicast channels in an ACL profile is 256. Note that the same multicast channel can be existed concurrently in two or more ACL profiles.

The ACL profile will be referred to only when ACL mode is enabled in the IGMP Configuration page (refer to section 4.3.6). From the *Bridge* menu, click on *IGMP* and then *IGMP Profile*. The following page is displayed:

IGMP Profile page = >

#### IGMP ACL Profile

IGMP PROFILE		BINDING PROFILE				
Profile ID	(01)	IP CHANNEL MAP	(1)Channel_001~032	Query		
Create		Delete				
All select:	<input type="checkbox"/>	Quickly IP Assign:	224 . 2 . 5 . 1	Quickly VID Assign:	1	Assign
Select Channel	IP Address	VID	Select Channel	IP Address	VID	
<input type="checkbox"/> 1	224 . 2 . 5 . 1	1	<input type="checkbox"/> 2	224 . 1 . 1 . 1	1	
<input type="checkbox"/> 3	224 . 1 . 1 . 1	1	<input type="checkbox"/> 4	224 . 1 . 1 . 1	1	
<input type="checkbox"/> 5	224 . 1 . 1 . 1	1	<input type="checkbox"/> 6	224 . 1 . 1 . 1	1	
<input type="checkbox"/> 7	224 . 1 . 1 . 1	1	<input type="checkbox"/> 8	224 . 1 . 1 . 1	1	
<input type="checkbox"/> 9	224 . 1 . 1 . 1	1	<input type="checkbox"/> 10	224 . 1 . 1 . 1	1	
<input type="checkbox"/> 11	224 . 1 . 1 . 1	1	<input type="checkbox"/> 12	224 . 1 . 1 . 1	1	
<input type="checkbox"/> 13	224 . 1 . 1 . 1	1	<input type="checkbox"/> 14	224 . 1 . 1 . 1	1	
<input type="checkbox"/> 15	224 . 1 . 1 . 1	1	<input type="checkbox"/> 16	224 . 1 . 1 . 1	1	

#### IGMP ACL Profile Configuration

Label	Description
<b>Profile ID</b>	Click on this drop-down list and specify the profile ID. Valid value is 01 ~ 48.
<b>IP CHANNEL MAP</b>	Click on this drop-down list and select the channel index range. Options are: Channel 001~032, Channel 033~064, ..., Channel 225~256.
<b>All select</b>	Click on this checkbox to select all channels in this page at one time. This is convenient for quick value assignment.

<b>Quickly IP Assign</b>	Type the IGMP group IP address here for quick assignment. Click on <b>Assign</b> button to put the value into the table. Then you can modify parts of the IP addresses directly in the table.
<b>Quickly VID Assign</b>	Type the IGMP group IP address here for quick assignment. Click on <b>Assign</b> button to put the value into the table.
<b>Assign</b>	Click on this button to apply the parameter values you have just entered. But these values haven't been really saved in the database. You must click on Create to save the values. Once the setting has been saved, you cannot modify the values. You must delete the channel and then create again.
<b>Select</b>	Click on this checkbox to select the channel you want to create, delete, or assign values.
<b>IP Address</b>	You can type the IGMP group address here and then click on Create button to save. Valid values: 224.0.0.0 ~ 239.255.255.255. The range of addresses from 224.0.0.0 to 224.0.0.255 is reserved for the use of routing protocols and other low-level topology discovery or maintenance protocols.
<b>Query</b>	Click on this button to display current channels in the profile.
<b>Create</b>	Click on this button to create new channels (IGMP group address).
<b>Delete</b>	Click on this button to delete channel(s) (IGMP group address).

**Binding Profile** page = >

[IGMP ACL Profile](#)

IGMP PROFILE
BINDING PROFILE

ADSL
Port 01~12
PVC-1

Max Groups range form 1 to 128

Modify

All select:  Quickly Max Group Assign:

Quickly Profile ID Assign: (01) Quickly Binding Assign: off Assign

Port	Max Groups	Profile ID	Binding Status	Port	Max Groups	Profile ID	Binding Status	Port	Max Groups	Profile ID	Binding Status
Port01	9	(01)	off	Port02	8	(01)	off	Port03	118	(02)	on
Port04	8	(01)	off	Port05	128	(01)	on	Port06	8	(01)	off
Port07	8	(01)	off	Port08	8	(01)	off	Port09	8	(01)	off
Port10	8	(01)	off	Port11	8	(01)	off	Port12	8	(01)	off

**IGMP ACL Profile Binding**

Label	Description
<div style="display: flex; justify-content: space-between; border-bottom: 1px solid black;"> <span>ADSL</span> <span>Port 01~12</span> <span>PVC-1</span> </div>	Click on these drop-down lists to select a line bridge port.

<b>All select</b>	Click on this checkbox to select all ports in this page at one time. This is convenient for quickly value assignment.
<b>Quickly Max Group Assign</b>	This field is for quick value assignment (assign the same value to all the ports in current page at one time). Type in the maximum IGMP groups can be joined simultaneously per line port, and then click on Assign to put the value into the table.
<b>Quickly Profile ID Assign</b>	Click on this drop-down list to select the profile ID you want to bind. This is for quick value assignment.
<b>Quickly Binding Assign</b>	Click on this drop-down list to select the binding action. This is for quick value assignment.  Options are: off -- unbind the profile, on -- bind the profile, reset -- rebind the profile.
<b>Assign</b>	Click on this button to apply the parameter values you have just entered (or selected). But these values haven't been really saved in the database. You must click on Modify to save the values.
<b>Modify</b>	Click on this button to submit the modification.
<b>Port</b>	Click on the checkbox to select the port you want to modify or assign values.
<b>Max Groups</b>	You can type in the maximum IGMP groups can be joined simultaneously to limit the concurrent multicast channels for a bridge port. This value is effective only when the limit maximum IGMP groups function is enabled (refer to section 4.3.6).
<b>Profile ID</b>	You can select the profile ID you want to bind here.
<b>Binding Status</b>	You can select the binding action here.

### 4.3.6.3 IGMP Multicast

This option allows you to query the IGMP multicast status. From the *Bridge* menu, click on *IGMP* and then *IGMP Multicast*. The *IGMP Group* page is displayed. Click on the *IGMP Type* drop-down list and select *Group* or *Source*.

**IGMP Type > Group:** Click on *List by* drop-down list to select listing by entry number or listing by VID & IGMP group IP.

**List by Number:**

IGMP Group

---

IGMP Type: <span style="border: 1px solid black; padding: 2px;">Group</span> <span style="font-size: 0.8em;">▼</span>						
List by: <span style="border: 1px solid black; padding: 2px;">Number</span> <span style="font-size: 0.8em;">▼</span> No. From <span style="border: 1px solid black; padding: 2px;">1</span> To <span style="border: 1px solid black; padding: 2px;">5</span> <span style="border: 1px solid black; padding: 2px 5px;">Query</span>						
No.	VID	Group IP	AddActions	IGMP Mode	Number of sources	Port
1	1003	224.0.0.13	1	Exclude	0	ADSL Port3-PVC3,
2	1004	224.0.0.12	1	Exclude	0	ADSL Port4-PVC2,
3	1002	224.0.0.11	1	Exclude	0	ADSL Port2-PVC4,
4	1001	224.0.0.10	1	Exclude	0	ADSL Port1-PVC1,

#### IGMP Group – List by Number

Label	Description
<b>No. From...To...</b>	Type in the entry number range in the table.
<b>Query</b>	Click on this button to display the table entries.

**List by VID & Group IP:**

IGMP Group

---

IGMP Type: <span style="border: 1px solid black; padding: 2px;">Group</span> <span style="font-size: 0.8em;">▼</span>						
List by: <span style="border: 1px solid black; padding: 2px;">VID &amp; Group IP</span> <span style="font-size: 0.8em;">▼</span> VID: <span style="border: 1px solid black; padding: 2px;">1001</span> Group IP: <span style="border: 1px solid black; padding: 2px;">224.0.0.10</span> <span style="border: 1px solid black; padding: 2px 5px;">Query</span>						
VID	Group IP	AddActions	IGMP Mode	Number of sources	Port	
1001	224.0.0.10	1	Exclude	0	ADSL Port1-PVC1,	

#### IGMP Group – List by VID & Group IP

Label	Description
<b>VID</b>	Type in the VLAN ID (1~ 4094).
<b>Group IP</b>	Type in the IGMP group IP address.
<b>Query</b>	Click on this button to display the table entries.



**IGMP Type > Source:** This option allows you to query the *Source IP*, which is the IP address of the source that is joining a multicast group on an interface. This option is available only when IGMP version 3 is selected for the system's IGMP configuration (refer to section 4.3.6).

IGMP Source

IGMP Type: Source ▾					
VID: 1001	Group IP: 224.0.0.11	No. From 1	To 5	<input type="button" value="Query"/>	
No	VID	Group IP	Source IP	Timer On	Port
1	1001	224.0.0.11	192.168.100.100	0	ADSL Port1-PVC1,
2	1001	224.0.0.11	192.168.100.101	0	ADSL Port1-PVC1,

### IGMP Source

Label	Description
<b>VID</b>	Type in the VLAN ID (1~ 4094).
<b>Group IP</b>	Type in the IGMP group IP address.
<b>No. From...To...</b>	Type in the entry number range in the table.
<b>Query</b>	Click on this button to display the table entries.

## 4.3.7 IPOA

### 4.3.7.1 BRAS MAC

The IDL-2402 supports an IPOA/IPOE IWF (Interworking Function). This option allows you to setup the BRAS MAC address that is used by the IPOA/IPOE IWF. From the *Bridge* menu, click on *IPOA* and then *BRAS MAC*. The following page is displayed.

#### To add/modify a MAC:

Select a checkbox beside an index and type in BRAS MAC address, and then click on **Modify** button.

#### To delete a MAC:

Select a checkbox (checkboxes) beside the index and then click on **Delete** button.

#### IPoA BRAS MAC

Select	Index	BRAS MAC(xx:xx:xx:xx:xx:xx)
<input type="checkbox"/>	1	: : : : :
<input type="checkbox"/>	2	: : : : :
<input type="checkbox"/>	3	: : : : :
<input type="checkbox"/>	4	: : : : :
<input type="checkbox"/>	5	: : : : :
<input type="checkbox"/>	6	: : : : :
<input type="checkbox"/>	7	: : : : :
<input type="checkbox"/>	8	: : : : :
<input type="checkbox"/>	9	: : : : :
<input type="checkbox"/>	10	: : : : :
<input type="checkbox"/>	11	: : : : :
<input type="checkbox"/>	12	: : : : :

### 4.3.7.2 Interface Setup

This option allows you to setup the interface for IPoA/IPoE IWF. From the *Bridge* menu, click on *IPOA* and then *Interface Setup*. The following page is displayed.

Click on the radio button to select a circuit, set values for the parameters, and then click on **Modify** button.

#### IPoA Interface Setup

Port 01~12												
VPI: 0		VCI: 43		MaxMAC: 4		CVID: 1001						
CVPRI: Pri-0		Traffic:Rx Default[UnShaped]			Tx Default[UnShaped]							
Bras: Macldx-1		Uplink: Giga1		Encap: LLC		Status: Disable		Modify		Query		
Select Port	VPI	VCI	MAX MAC	C-VLAN ID	C-VLAN Priority	Traffic Rx/Tx	BRAS Macldx	Uplink Index	AAL5 Encap	IPoA Status		
<input checked="" type="radio"/>	1	0	43	4	1001	0	Def / Def	1	Giga1	LLC	Disabled	
<input type="radio"/>	2	0	43	4	1002	0	Def / Def	1	Giga1	LLC	Disabled	
<input type="radio"/>	3	0	43	4	1003	0	Def / Def	1	Giga1	LLC	Disabled	
<input type="radio"/>	4	0	43	4	1004	0	Def / Def	1	Giga1	LLC	Disabled	
<input type="radio"/>	5	0	43	4	1005	0	Def / Def	1	Giga1	LLC	Disabled	

#### IPoA Interface Setup

Label	Description
Port 01~12	Click on the drop-down list and select the line ports to be listed.
VPI	Type in the VPI. Value range is 0 ~ 255.
VCI	Type in the VCI. Value range is 21, 32 ~ 65535.
MaxMAC	Type in the maximum number of MAC addresses that can be learned by the bridge port (for GBE interface: 1 ~ 4096, for DSL interface: 1 ~ 128).
CVID	Type in the VID value of C-Tag (the innermost VLAN tag as defined in IEEE 802.1ad and having an EtherType value of 0x8100). The C-VID indicates the access loop.
CVPRI	Click on the drop-down list and select the VLAN priority level of C-Tag (Pri-0 ~ 7).

<b>Traffic (Rx/Tx)</b>	Click on the drop-down lists and select a traffic type for transmit and receive direction respectively. Available options are created in the ATM Traffic Descriptor page. See section 4.5.1.
<b>BRAS</b>	Click on the drop-down list and select a BRAS MAC. Available options are created in the <i>IPoA BRAS MAC</i> page. See section 4.3.7.
<b>Uplink</b>	Click on the drop-down list and select the uplink interface.
<b>Encap</b>	Select AAL5 Encapsulation Type: VCMUX/LLC
<b>Status</b>	Enable/Disable IPoA IWF.
<b>Modify</b>	Click on this button to submit the modification.
<b>Query</b>	Click on this button to query most recent data.

## 4.4 ADSL

### 4.4.1 Profile

#### 4.4.1.1 Service Main Profile

This option allows you to configure the ADSL line service profile. From the *ADSL* menu, click on *Profile* and then *Service Profile(main)*. The following page is displayed.

ADSL Service Profile

Select Index: (1)01~10 <input type="button" value="Modify"/> <input type="button" value="Delete"/> <input type="button" value="Query"/>				
The First Index is default profile can't modify & delete.				
	Index	Name	Rate Mode DownStream	Rate Mode UpStream
Next →	3	Test	(3)Dynamic	(3)Dynamic
<input type="radio"/>	1	default	Init	Init
<input type="radio"/>	2	Name2	Manual	Manual
<input checked="" type="radio"/>	3	Test	Dynamic	Dynamic
<input type="radio"/>	4	----	----	----
<input type="radio"/>	5	----	----	----
<input type="radio"/>	6	----	----	----
<input type="radio"/>	7	----	----	----
<input type="radio"/>	8	----	----	----
<input type="radio"/>	9	----	----	----
<input type="radio"/>	10	----	----	----

#### ADSL Line Service Profile setup

Label	Description
Select Index	Click on the drop-down list and select the range of profile index. Options are: 0~10, 11~20, ..., 111~120.
Index	This field shows the profile index. Click on the radio button beside the profile index to select the profile you want to modify or delete. Note that profile 1 (default) cannot be modified or deleted.
Name	Type in the name of the profile.

<p><b>Rate Mode Downstream</b></p>	<p>Click on the drop-down list and select the Downstream Rate Adaptive Mode. Valid options are:</p> <p>Manual – Rate changed manually</p> <p>Init – Rate automatically selected at start up only and does not change after that</p> <p>Dynamic – Rate automatically selected at initialization and is continuously adapted during operation (show time).</p>
<p><b>Rate Mode Upstream</b></p>	<p>Click on the drop-down list and select the Upstream Rate Adaptive Mode. Valid options are:</p> <p>Manual – Rate changed manually</p> <p>Init – Rate automatically selected at start up only and does not change after that</p> <p>Dynamic - Rate automatically selected at initialization and is continuously adapted during operation (show time).</p>

### 4.4.1.2 Service Channel Profile

This option allows you to configure the ADSL service channel profile. From the *ADSL* menu, click on *Profile* and then *Service Profile(Channel)*. The following page is displayed.

ADSL Service Channel Profile

Select Index: (1)1~5 <input type="button" value="Modify"/> <input type="button" value="Query"/>													
The First Index is default profile can't modify & delete. To modify a service channel profile, please create service main profile first.													
Index	L2 Packet	Direction	BitRate (kbit/s)0~65535				DownShift		UpShift		InterLeave MaxDelay 1~63 (ms)	Min INP 0~8 (symbols)	
			Min	Planned	Max	L2 Min	Noise Margin (db)	Min Interval (sec)	Noise Margin (db)	Min Interval (sec)			
Next → 1	23	DS	128	1024	65535	128	3.0	10	9.0	10	1	0.0	
		US	4	128	65535	N/A	3.0	10	9.0	10	1	0.0	
<input checked="" type="radio"/> 1	23	DS	128	1024	65535	128	3.0	10	9.0	10	1	0.0	
		US	4	128	65535	---	3.0	10	9.0	10	1	0.0	
<input type="radio"/> 2	23	DS	128	1024	65535	128	3.0	10	9.0	10	1	0.0	
		US	4	128	65535	---	3.0	10	9.0	10	1	0.0	
<input type="radio"/> 3	23	DS	128	1024	65535	128	3.0	10	9.0	10	1	0.0	
		US	4	128	65535	---	3.0	10	9.0	10	1	0.0	
<input type="radio"/> 4	0	DS	0	0	0	0	0.0	0	0.0	0	0	0.0	
		US	0	0	0	---	0.0	0	0.0	0	0	0.0	
<input type="radio"/> 5	0	DS	0	0	0	0	0.0	0	0.0	0	0	0.0	
		US	0	0	0	---	0.0	0	0.0	0	0	0.0	

### ADSL Service Channel Profile setup

Label	Description
Select Index	Click on the drop-down list and select the range of profile index. Options are: 1~5, 6~10, ..., 116~120.
Index	This field shows the profile index. Click on the radio button beside the profile index to select the profile you want to modify.  Note that profile 1 (default) cannot be modified.
L2 Packet	This is a threshold value that is the minimum packet size before the system leaving the L2 low power state. Valid value is 0~32.
Direction	DS: downstream. US: upstream.
BitRate	Min: Minimum bit rate during show time Planned: Planned bit rate during setup Max: Maximum bit rate during show time L2 Min: Minimum bit rate during L2 low power state
DownShift Noise Margin (dB)	Decrease net data rate if Noise Margin is below the Downshift Noise

<b>Min Interval (sec)</b>	Margin for DownShift Min Interval.
<b>UpShift Noise Margin (dB)/Min Interval (sec)</b>	Increase net data rate if Noise Margin is above the Upshift Noise Margin for Upshift Min Interval.
<b>Interleaving MaxDelay</b>	Maximum interleaving delay (1~63 ms)
<b>IMP 0~8 (symbols)</b>	Minimum impulse noise protection (0.0~8.0 dB)



### 4.4.1.3 Spectrum Main Profile

This option allows you to configure the ADSL spectrum profile. From the *ADSL* menu, click on *Profile* and then *Spectrum Profile(main)*. The following page is displayed.

ADSL Spectrum Profile

Select Index: (1)1~4 <input type="button" value="Query"/> <input type="button" value="Modify"/> <input type="button" value="Delete"/>										
The First Index is default profile can't modify & delete.										
<input type="button" value="OP Mode-1"/>		<input type="button" value="Carrier Mask-1"/>		<input type="button" value="RFI-1"/>						
Index	Name	Power Mode	Pwr Management		Direction	Message		Noise Margin 0~31.0,51.1(db)		
			L0 Time	L2 ATPR		ds min				
			L2 Time	L2 ATPRT		us min	Min	Tar	Max	
Next → 1	default	Disable L2 L2L3 <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	30	1	DS	4	0.0	6.0	51.1	
			30	6	US	4	0.0	6.0	51.1	
<input checked="" type="radio"/> 1 complete	default	Disable	30	1	DS	4	0.0	6.0	51.1	
			30	6	US	4	0.0	6.0	51.1	
<input type="radio"/> 2 complete	Name2	Disable	30	1	DS	4	0.0	6.0	51.1	
			30	6	US	4	0.0	6.0	51.1	
<input type="radio"/> 3	----	----	--	--	DS	--	---	---	---	
			--	--	US	--	---	---	---	
<input type="radio"/> 4	----	----	--	--	DS	--	---	---	---	
			--	--	US	--	---	---	---	

#### ADSL Spectrum Profile setup

Label	Description
<b>Select Index</b>	Click on the drop-down list and select the range of profile index. Options are: 1~4, 5~8, ..., 117~120.
<b>Index</b>	This field shows the profile index. Click on the radio button beside the profile index to select the profile you want to modify or delete. Note that profile 1 (default) cannot be modified or deleted.
<b>Name</b>	Type in the name of the profile.
<b>Power Mode</b>	Click on the radio button to select allowed power management mode. Options are Disable (only L0 state allowed), L2 (L0 and L2 states allowed), L2L3 (L0, L2, and L3 states allowed).
<b>L0 Time</b>	Type in the minimum time (in seconds) between Exit from L2 low power state and the next Entry into the L2 low power state. Value range is 0 ~ 255.
<b>L2 Time</b>	Type in the minimum time (in seconds) between an Entry into L2 low power state and the first L2 low power trim request, and between two consecutive L2 power trim requests. Value range is 0 ~ 255.
<b>L2 ATPR</b>	Type in the maximum aggregate transmit power reduction (in dB) that is allowed at

	transition of L0 to L2 state or an L2 low power trim request. Value range is 0 ~ the value of L2 ATPRT (dB).																										
<b>L2 ATPRT</b>	Type in the total maximum aggregate transmit power reduction (in dB) that is allowed in the L2 state; the total reduction is the sum of all reductions of L2 Request (i.e., at transition of L0 to L2 state) and L2 power trims. Value range is 0 ~ 15 (dB).																										
<b>Direction</b>	DS: downstream. US: upstream.																										
<b>Message</b>	Type in the minimum rate of the message-based overhead that shall be maintained by the ATU in upstream/downstream direction. Value range is 4 ~ 28k bit/s.																										
<b>Noise Margin</b>	Type in the Noise Margin values. Min: Minimum noise margin (0.0~31.0,51.1db, default 0.0) Tar: Target noise margin (0.0~31.0,51.1db, default 6.0) Max: Maximum noise margin (0.0~31.0,51.1db, default 51.1)																										
<b>Modify</b>	Click on this button to submit the modification																										
<b>Delete</b>	Click on this button to delete a profile																										
<b>Query</b>	Click on this button to display the profiles.																										
<b>OP Mode-N</b>	<p>Click on this button to view/modify allowed ADSL modes of operation for the profile. The following page is displayed.</p> <p>An OP Mode is supported if the check box is selected.</p> <p><i>Modify Status:</i></p> <p>Complete – modems will re-train after you click on Apply button</p> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><b>ADSL Spectrum Profile[2] OP Mode</b></p> <p style="text-align: center;">Modify Status: Complete <input type="button" value="Apply"/> <input type="button" value="BACK"/></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td><input checked="" type="checkbox"/> 0(bit00)ANSI_T1413</td><td><input checked="" type="checkbox"/> 1(bit01)ETSI_DTS_TM06006</td></tr> <tr><td><input checked="" type="checkbox"/> 2(bit02)992.1_A_Pots_NonOverlapped</td><td><input checked="" type="checkbox"/> 3(bit04)992.1_B_Isdn_NonOverlapped</td></tr> <tr><td><input type="checkbox"/> 4(bit06)992.1_C_TcmIsdn_NonOverlapped</td><td><input checked="" type="checkbox"/> 5(bit08)992.2_A_Pots_NonOverlapped</td></tr> <tr><td><input type="checkbox"/> 6(bit10)992.2_C_TcmIsdn_NonOverlapped</td><td><input checked="" type="checkbox"/> 7(bit18)992.3_A_Pots_NonOverlapped</td></tr> <tr><td><input checked="" type="checkbox"/> 8(bit20)992.3_B_Isdn_NonOverlapped</td><td><input type="checkbox"/> 9(bit24)992.4_A_Pots_NonOverlapped</td></tr> <tr><td><input type="checkbox"/> 10(bit28)992.3_I_AllDigital_NonOverlapped</td><td><input type="checkbox"/> 11(bit30)992.3_J_AllDigital_NonOverlapped</td></tr> <tr><td><input type="checkbox"/> 12(bit32)992.4_I_AllDigital_NonOverlapped</td><td><input checked="" type="checkbox"/> 13(bit34)992.3_L_Pots_NonOverlapped_Mode1</td></tr> <tr><td><input checked="" type="checkbox"/> 14(bit35)992.3_L_Pots_NonOverlapped_Mode2</td><td><input type="checkbox"/> 15(bit39)992.3_M_Pots_Extend_US_NonOverlapped</td></tr> <tr><td><input checked="" type="checkbox"/> 16(bit40)992.5_A_Pots_NonOverlapped</td><td><input checked="" type="checkbox"/> 17(bit42)992.5_B_Isdn_NonOverlapped</td></tr> <tr><td><input type="checkbox"/> 18(bit46)992.5_I_AllDigital_NonOverlapped</td><td><input type="checkbox"/> 19(bit48)ANSI_T1424</td></tr> <tr><td><input type="checkbox"/> 20(bit49)ETSI_T5_101_270</td><td><input type="checkbox"/> 21(bit50)993.1</td></tr> <tr><td><input type="checkbox"/> 22(bit51)IEEE_8023ah</td><td><input type="checkbox"/> 23(bit56)992.5_J_AllDigital_NonOverlapped</td></tr> <tr><td><input type="checkbox"/> 24(bit58)992.5_M_Pots_Extend_US_NonOverlapped</td><td></td></tr> </tbody> </table> <p style="text-align: center;">[ <a href="#">ADSL Spectrum RFI</a>   <a href="#">ADSL Spectrum Carrier Mask</a> ]</p> </div>	<input checked="" type="checkbox"/> 0(bit00)ANSI_T1413	<input checked="" type="checkbox"/> 1(bit01)ETSI_DTS_TM06006	<input checked="" type="checkbox"/> 2(bit02)992.1_A_Pots_NonOverlapped	<input checked="" type="checkbox"/> 3(bit04)992.1_B_Isdn_NonOverlapped	<input type="checkbox"/> 4(bit06)992.1_C_TcmIsdn_NonOverlapped	<input checked="" type="checkbox"/> 5(bit08)992.2_A_Pots_NonOverlapped	<input type="checkbox"/> 6(bit10)992.2_C_TcmIsdn_NonOverlapped	<input checked="" type="checkbox"/> 7(bit18)992.3_A_Pots_NonOverlapped	<input checked="" type="checkbox"/> 8(bit20)992.3_B_Isdn_NonOverlapped	<input type="checkbox"/> 9(bit24)992.4_A_Pots_NonOverlapped	<input type="checkbox"/> 10(bit28)992.3_I_AllDigital_NonOverlapped	<input type="checkbox"/> 11(bit30)992.3_J_AllDigital_NonOverlapped	<input type="checkbox"/> 12(bit32)992.4_I_AllDigital_NonOverlapped	<input checked="" type="checkbox"/> 13(bit34)992.3_L_Pots_NonOverlapped_Mode1	<input checked="" type="checkbox"/> 14(bit35)992.3_L_Pots_NonOverlapped_Mode2	<input type="checkbox"/> 15(bit39)992.3_M_Pots_Extend_US_NonOverlapped	<input checked="" type="checkbox"/> 16(bit40)992.5_A_Pots_NonOverlapped	<input checked="" type="checkbox"/> 17(bit42)992.5_B_Isdn_NonOverlapped	<input type="checkbox"/> 18(bit46)992.5_I_AllDigital_NonOverlapped	<input type="checkbox"/> 19(bit48)ANSI_T1424	<input type="checkbox"/> 20(bit49)ETSI_T5_101_270	<input type="checkbox"/> 21(bit50)993.1	<input type="checkbox"/> 22(bit51)IEEE_8023ah	<input type="checkbox"/> 23(bit56)992.5_J_AllDigital_NonOverlapped	<input type="checkbox"/> 24(bit58)992.5_M_Pots_Extend_US_NonOverlapped	
<input checked="" type="checkbox"/> 0(bit00)ANSI_T1413	<input checked="" type="checkbox"/> 1(bit01)ETSI_DTS_TM06006																										
<input checked="" type="checkbox"/> 2(bit02)992.1_A_Pots_NonOverlapped	<input checked="" type="checkbox"/> 3(bit04)992.1_B_Isdn_NonOverlapped																										
<input type="checkbox"/> 4(bit06)992.1_C_TcmIsdn_NonOverlapped	<input checked="" type="checkbox"/> 5(bit08)992.2_A_Pots_NonOverlapped																										
<input type="checkbox"/> 6(bit10)992.2_C_TcmIsdn_NonOverlapped	<input checked="" type="checkbox"/> 7(bit18)992.3_A_Pots_NonOverlapped																										
<input checked="" type="checkbox"/> 8(bit20)992.3_B_Isdn_NonOverlapped	<input type="checkbox"/> 9(bit24)992.4_A_Pots_NonOverlapped																										
<input type="checkbox"/> 10(bit28)992.3_I_AllDigital_NonOverlapped	<input type="checkbox"/> 11(bit30)992.3_J_AllDigital_NonOverlapped																										
<input type="checkbox"/> 12(bit32)992.4_I_AllDigital_NonOverlapped	<input checked="" type="checkbox"/> 13(bit34)992.3_L_Pots_NonOverlapped_Mode1																										
<input checked="" type="checkbox"/> 14(bit35)992.3_L_Pots_NonOverlapped_Mode2	<input type="checkbox"/> 15(bit39)992.3_M_Pots_Extend_US_NonOverlapped																										
<input checked="" type="checkbox"/> 16(bit40)992.5_A_Pots_NonOverlapped	<input checked="" type="checkbox"/> 17(bit42)992.5_B_Isdn_NonOverlapped																										
<input type="checkbox"/> 18(bit46)992.5_I_AllDigital_NonOverlapped	<input type="checkbox"/> 19(bit48)ANSI_T1424																										
<input type="checkbox"/> 20(bit49)ETSI_T5_101_270	<input type="checkbox"/> 21(bit50)993.1																										
<input type="checkbox"/> 22(bit51)IEEE_8023ah	<input type="checkbox"/> 23(bit56)992.5_J_AllDigital_NonOverlapped																										
<input type="checkbox"/> 24(bit58)992.5_M_Pots_Extend_US_NonOverlapped																											

(To be continued)

Carrier Mask-N

Click on this button to view/modify the current downstream/upstream Carrier Mask parameters. Input Carrier bit value and then click **Apply**.

*Modify Status:*

Complete – modems will re-train after you click on Apply button

[ADSL Spectrum Profile# 1 Carrier MASK](#)

Modify Status: Complete

DownStream Carrier Mask 0x[00]~0x[FF]								
Carrier[0~63]	00	00	00	00	00	00	00	00
Carrier[64~127]	00	00	00	00	00	00	00	00
Carrier[128~191]	00	00	00	00	00	00	00	00
Carrier[192~255]	00	00	00	00	00	00	00	00
Carrier[256~319]	00	00	00	00	00	00	00	00
Carrier[320~383]	00	00	00	00	00	00	00	00
Carrier[384~447]	00	00	00	00	00	00	00	00
Carrier[448~511]	00	00	00	00	00	00	00	00
UpStream Carrier Mask 0x[00]~0x[FF]								
Carrier[0~63]	00	00	00	00	00	00	00	00

Carriers 0 to 255 are used for all ADSL/ADSL2 operational modes except for ADSL2 Plus which uses carriers 0 to 511.

[ [ADSL Spectrum RFI](#) | [ADSL Spectrum OP Mode](#) ]

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(To be continued)

Click on this button to view/modify Radio Frequency Interference (RFI) Bands data. Input the Start/Stop frequency, select the Ingress Level, Egress Control, Signal Type, and then click on the **Apply** button.

*Modify Status:*

Complete – modems will re-train after you click on Apply button

**ADSL Spectrum Profile# 1 RFI**

---

**Modify Status: Complete**

NO.	Start Frequency 0~12000 (kHz)	Stop Frequency 0~12000 (kHz)	Ingress Level	Egress Control	Signal Type
0	0	0	None ▾	NoControl ▾	Neither ▾
1	0	0	None ▾	NoControl ▾	Neither ▾
2	0	0	None ▾	NoControl ▾	Neither ▾
3	0	0	None ▾	NoControl ▾	Neither ▾
4	0	0	None ▾	NoControl ▾	Neither ▾
5	0	0	None ▾	NoControl ▾	Neither ▾
6	0	0	None ▾	NoControl ▾	Neither ▾
7	0	0	None ▾	NoControl ▾	Neither ▾

[ | [ADSL Spectrum Carrier Mask](#) | [ADSL Spectrum OP Mode](#) ]

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RFI-N

#### 4.4.1.4 Spectrum ADSLx Profile

This option allows you to configure the ADSL2/2<sup>+</sup>/REDSL spectrum profile. From the ADSL menu, click on *Profile* and then *Spectrum Profile(ADSLx)*. The following page is displayed.

ADSL Spectrum Profile - ADSL2

Select Index: <input type="text" value="(1)1~4"/> <input type="button" value="Modify"/> <input type="button" value="Query"/> The First Index is default profile can't modify & delete. To modify Spectrum Adsl2,ReAdsl or Adsl2plus profile , please create spectrum main profile first.							
	Index	Modem Features	Direction	Aggregate Power	PSD Level	PBO	Max Rx Aggr. Allowed PWR
Next →	2	ADSL2	DS	10.0	-40.0	NA	NA
		Enabled	US	10.0	-38.0	OFF	25.5
<input type="radio"/>	1	ADSL2	DS	25.5	-40.0	----	----
		Disabled	US	25.5	-38.0	OFF	25.5
<input type="radio"/>	2	ADSL2	DS	25.5	-40.0	----	----
		Disabled	US	25.5	-38.0	OFF	25.5
<input type="radio"/>	3	----	DS	0.0	0.0	----	----
		----	US	0.0	0.0	----	0.0
<input type="radio"/>	4	----	DS	0.0	0.0	----	----
		----	US	0.0	0.0	----	0.0

#### ADSL2/ReADSL/ADSL2<sup>+</sup> Spectrum Profile

Label	Description
Select Index	Click on the drop-down list to select the range of profile index. Options are: 1~4, 5~8, ..., 117~120.
Index	This field shows the profile index.
Modem Features	Select ADSL2/ReADSL2/ADSL2+ and Enable/Disable special modem functions for better performance.
Direction	DS: downstream. US: upstream
Aggregate Power	Maximum nominal aggregate transmit power (0~25.5dB)
PSD Level	Maximum PSD level. Valid values are: ADSL2: -60 ~ -40 dB/Hz DS, -60 ~ -38 dB/Hz US ReADSL2: -60 ~ -37 dB/Hz DS, -60 ~ -32.9 dB/Hz US ADSL2+: -60 ~ -40 dB/Hz DS, -60 ~ -38 dB/Hz US

<b>PSD Shape</b>	<p>Only for ADSL2+. Valid options are:</p> <p>Standard/CA100/CA110/CA120/CA130/CA140/CA150/  CA160CA170/CA180/CA190/CA200/CA210/CA220/CA230/  CA240/CA250/CA260/CA270/CA280</p>
<b>PBO</b>	Power backoff operation mode (OFF/ON).
<b>Max Rx Aggr. Allowed PWR</b>	Maximum aggregate receive power over a set of subcarriers. It ranges from -25.5 to +25.5 dBm, with 0.1 dB steps.

### 4.4.1.5 TCA Profile

This option allows you to setup the PM counter threshold for TCA (threshold crossing alert). From the *ADSL* menu, click on *Profile* and then *TCA Profile*. The following page is displayed.

ADSL TCA Profile

(1)Page1 of 16

The First Index is default profile can't modify & delete.  
 An Interval\_TCA's value range from 0 to 900 (sec)  
 A Day\_TCA's value range from 0 to 86400(Sec)  
 The int for Interval's(15Minute) TCA and the day for Day's TCA  
 The NE for Near\_End and the FE for Far\_End

Select No	Enable	int ESs	int SESs	int UASs	day ESs	day SESs	day UASs	int LOS	int LOF	int LOPWR	int LOL	int ErrFrm
<input type="checkbox"/>	1 Disabled	NE 0	0	0	0	0	0	0	0	NA	0	0
		FE 0	0	0	0	0	0	0	0	0	NA	0
<input type="checkbox"/>	2 Select	NE								NA		
		FE									NA	
<input type="checkbox"/>	3 Select	NE								NA		
		FE									NA	
<input type="checkbox"/>	4 Select	NE								NA		
		FE									NA	

#### ADSL TCA Threshold setup

Label	Description
(1)Page1 of 16	Click on this drop-down list to select the page to be displayed.
<b>Modify</b>	Once you have typed in new threshold values, click on this button to submit the modification.
<b>Delete</b>	Click on this button to delete a selected profile (or profiles).
<b>Select</b>	Click on the checkbox to select the profile you want to modify or delete.
<b>Enable</b>	To issue TCA when the PM statistics exceed thresholds, this profile must be enabled.
<b>int/day ESs-NE/FE</b>	Interval/Day Errored Seconds – near end/far end
<b>int/day SESs-NE/FE</b>	Interval/Day Severely Errored Seconds – near end/far end
<b>int/day UASs-NE/FE</b>	Interval/Day Unavailable Seconds – near end/far end
<b>int LOS-NE/FE</b>	Interval Loss of Signal – near end/far end
<b>int LOF-NE/FE</b>	Interval Loss of Frame – near end/far end
<b>int LOPWR-FE</b>	Interval Loss of Power – far end

<b>int LOL-NE</b>	Interval Loss of Link – near end
<b>int ErrFrm-NE/FE</b>	Interval Error Frame – near end/far end



## 4.4.2 Data & Inventory

### 4.4.2.1 Inventory

This option allows you to view the inventory of the ATUC and ATUR. From the *ADSL* menu, click on *Data & Inventory* and then *Inventory*. The following page is displayed.

[ADSL Inventory](#)

---

Port(ATUC)	Serial Number	Version Number	System Vendor ID	Modem Vendor ID
1	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
2	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
3	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
4	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
5	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
6	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
7	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
8	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
9	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
10	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
11	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM
12	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM

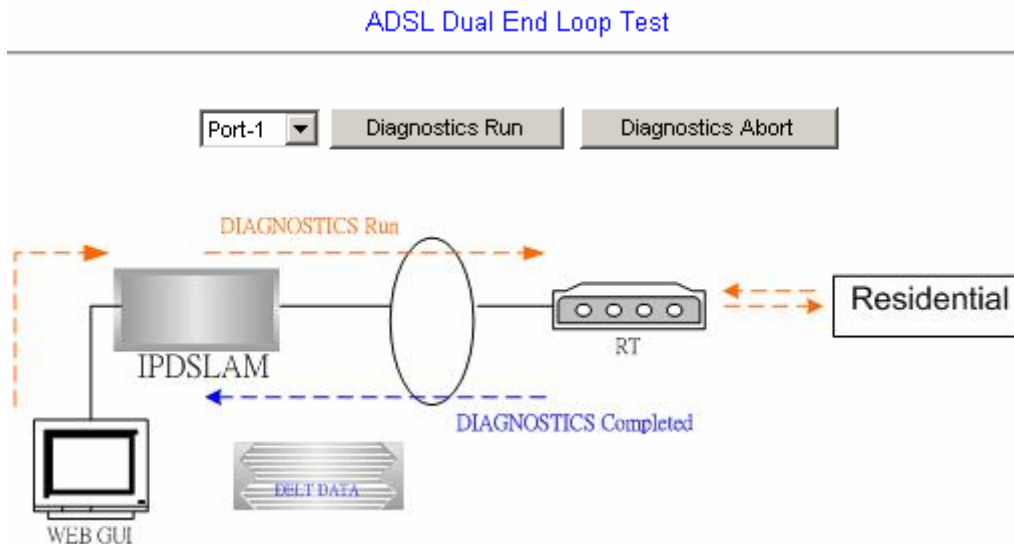
[ [Circuit Setup](#) | [System Inventory](#) ]

### ADSL Inventory

Label	Description
Port 01~12	Click on this drop-down list and select the ports to be displayed.
Atux	Select ATUC or ATUR inventory to be displayed.
Query	To view inventory, click on this button once you have selected the port and ATUx.

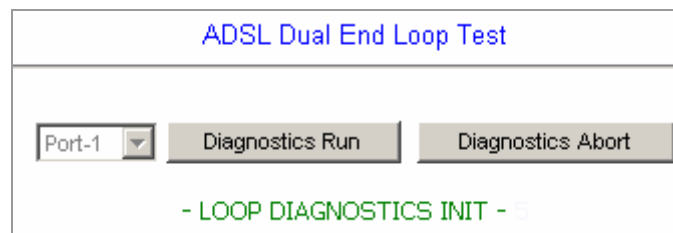
#### 4.4.2.2 Loop Test

This option allows you to do the ADSL Dual End Loop Test. From the *ADSL* menu, click on *Data & Inventory* and then *Loop Test*. The following page is displayed.



Click on the drop-down list and select the line port you want to test. Then click on **Diagnostics Run** to start a DELT. If you want to discontinue the test or make the loop go back to the normal state when the test has finished, just click on **Diagnostics Abort**.

**Test in progress:** Click on **Diagnostics Run** and then the following page is displayed.



**Test completed:** When the test has completed successfully, test result is displayed as follows.

ADSL Dual End Loop Test

Port-2 Diagnostics Run Diagnostics Abort

Dual	Attainable BitRate		Loop Attn		Signal Attn		SNR Margin		Actual Tx Power FE	
	Port	DS(kbps)	US(kbps)	DS(db)	US(db)	DS(db)	US(db)	DS(db)	US(db)	DS(db)
2	23039	1242	1.0	0.7	1.0	0.0	7.9	6.0	-3.4	12.3

LOOP DIAGNOSTICS COMPLETED...

Carrier Type: TSS  SNR  QLN  HLIN  HLOG

**The TSS formula:  $tss=value*(1/32768)$ .The Transmit Spectrum Shaping for the Downstream direction as exchanged at init.(Near-END)**

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
0-31	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3492	3723	3967	4265	4552	4857	5183	5545	5916	6310	6747	7193	7666
32-63	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
64-95	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
96-127	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
128-159	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
160-191	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
192-223	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
224-255	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
256-287	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
288-319	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
320-351	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
352-383	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
384-415	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
416-447	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
448-479	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275
480-511	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275

**The TSS formula:  $tss=value*(1/32768)$ .The Transmit Spectrum Shaping for the Upstream direction as exchanged at init.(Far-END)**

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
0-31	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	
32-63	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	3275	

**Carrier Type:** TSS  SNR  QLN  HLIN  HLOG

**The SNR formula :snr=-32+(value/2) (dB).The Signal to Noise Ratio per carrier over the Upstream passband.(Near-END)**

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
0-31	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255
32-63	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

**The SNR formula :snr=-32+(value/2) (dB).The Signal to Noise Ratio per carrier over the Downstream passband.(Far-END)**

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
0-31	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64		
32-63	64	142	144	148	151	153	157	160	162	163	166	169	170	172	173	174	176	177	178	179	179	180	180	181	182	182	183	183	183	183	183	183		
64-95	181	172	184	184	184	184	184	183	184	184	183	182	184	184	183	183	183	183	183	183	183	183	180	163	175	182	182	183	182	182	182	183	182	
96-127	182	182	182	182	181	182	181	181	181	181	181	181	181	181	181	181	180	181	181	180	181	180	180	180	180	180	180	180	180	180	180	180	179	179
128-159	179	179	178	179	179	179	177	176	179	179	179	179	178	179	178	179	179	178	178	179	179	178	178	179	178	178	178	179	178	178	178	178	178	
160-191	178	177	178	178	178	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	176	177	176	176	177	175	176	176	176	176	176	176	
192-223	175	176	176	176	175	176	175	175	175	175	175	174	173	174	175	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	173	174	
224-255	174	174	174	174	174	175	174	174	174	174	175	174	173	173	172	174	173	172	174	173	172	174	173	174	174	174	174	174	174	174	174	174	170	
256-287	171	171	174	174	174	173	173	173	173	172	172	172	171	172	172	172	171	172	171	169	170	170	169	171	171	170	170	170	170	172	170	170	171	
288-319	170	171	170	171	170	171	170	172	172	172	172	172	171	172	171	173	171	172	171	172	172	172	171	171	172	171	172	171	171	172	169	171		
320-351	170	170	170	170	169	169	169	169	169	169	167	167	167	166	169	166	166	165	166	164	164	164	163	162	162	163	161	161	161	161	162	163	165	
352-383	162	162	161	161	161	163	161	161	161	164	165	163	162	165	165	163	164	164	163	165	164	164	166	166	167	166	165	165	165	165	165	167	165	
384-415	167	164	165	163	163	164	164	162	164	161	161	162	161	162	161	161	159	165	164	163	161	161	163	162	161	160	160	161	155	155	157	153		
416-447	152	159	157	160	160	158	160	160	160	159	161	161	160	162	156	157	158	158	161	157	159	159	159	159	159	159	160	160	161	158	162	160	161	
448-479	160	159	161	162	159	161	161	160	160	159	160	158	159	158	156	159	157	156	161	160	161	160	160	158	160	153	155	151	156	157	157	152	155	
480-511	157	154	152	154	150	151	149	150	151	153	150	151	149	151	149	148	149	149	144	149	143	148	144	150	147	139	145	139	135	128	126	64		

**Carrier Type:** TSS  SNR  QLN  HLIN  HLOG

**The QLN formula: qln=-23-(value/2) (dBm/Hz).The Quiet Line Noise measurement per carrier over the Upstream passband.(Near-END)**

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
0-31	255	195	190	191	190	190	194	179	170	166	175	173	173	172	174	180	176	180	174	181	178	178	185	182	182	183	182	181	184	186	188	191	
32-63	194	193	192	191	190	190	189	191	190	191	189	190	191	190	192	193	190	189	189	191	190	190	190	190	190	195	190	191	192	194	191	191	191

**The QLN formula: qln=-23-(value/2) (dBm/Hz).The Quiet Line Noise measurement per carrier over the Downstream passband.(Far-END)**

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
0-31	146	230	230	228	220	224	226	226	226	226	224	226	226	226	226	214	216	224	222	208	210	222	224	222	220	220	218	216	214	212	210	208	
32-63	206	204	200	196	198	189	192	192	192	192	190	190	190	186	190	188	190	188	188	186	186	188	185	186	186	188	186	186	186	186	186	186	184
64-95	182	174	184	184	184	186	184	184	184	184	184	182	182	182	182	182	182	182	182	182	182	180	162	174	180	180	180	180	180	180	180	180	
96-127	182	180	180	180	180	182	180	178	182	180	178	178	180	180	178	178	178	178	178	178	178	178	178	178	178	180	178	180	178	178	178	178	
128-159	178	178	178	178	178	178	176	176	176	178	178	178	178	178	178	176	178	178	178	178	178	178	178	178	178	176	178	176	178	178	176	178	
160-191	176	176	178	176	176	178	178	176	178	176	178	176	176	176	178	176	178	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
192-223	176	176	176	176	174	176	176	176	176	176	176	176	176	174	178	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	178
224-255	176	176	178	176	176	174	178	176	178	176	176	176	176	174	178	176	176	178	176	178	176	178	178	176	176	178	178	176	178	178	178	176	178
256-287	178	178	180	180	180	178	180	180	182	180	182	180	180	180	182	180	182	180	182	180	182	180	180	180	180	180	180	180	182	180	180	182	182
288-319	182	182	180	182	182	182	182	182	180	182	180	182	182	182	182	182	182	182	182	182	182	182	182	184	180	182	180	182	180	180	182	182	180
320-351	182	182	182	180	182	182	182	182	182	180	182	184	180	182	182	182	182	182	182	182	182	182	182	182	180	182	184	182	182	180	182	182	182
352-383	182	182	182	182	182	182	180	182	180	182	180	182	182	182	182	182	180	182	182	182	182	182	182	182	182	182	184	182	182	182	184	182	182

HlinUpstream Scale=48854

HlinDownstream Scale=38558

**Carrier Type:** TSS  SNR  QLN  HLIN  HLOG

**The HLIN formula:  $hlin=(hlin.scale/32768)^*(hlin.real+j*hlin.imag)/32768$ .Complex values in linear scale for each carrier over the Upstream passband.(F)**

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
0-31	=-1730 =1729	=3 =3	=5 =5	=8 =8	=8 =8	=4 =4	=-1622 =1422	=-8244 =3535	=20561 =19138	=16623 =-22422	=-14752 =-25303	=-32101 =1128	=-19007 =29438	=16456 =29648	=32766 =4904	=23160 =-21524	=-833 =-29757	=-20689 =-18509	=-25652 =1596	=-15921 =17544	=245 =21619	=13220 =14460	=17595 =2269	=13546 =-8565	=490 =-13720	=-4166 =12447	
32-63	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769	=-32769 =32769

**The HLIN formula:  $hlin=(hlin.scale/32768)^*(hlin.real+j*hlin.imag)/32768$ .Complex values in linear scale for each carrier over the Downstream passband**

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
0-31	=0 =1	=230 =-230	=165 =-165	=165 =-165	=100 =100	=100 =100	=100 =100	=100 =100	=68 =-68	=68 =-68	=68 =-68	=100 =100	=68 =-68	=68 =-68	=68 =-68	=68 =-68	=68 =-68	=35 =35	=32 =-32	=64 =-64	=58 =-58	=162 =-126	=178 =-256	=22 =22	=224 =-353	=454 =-246	
32-63	=-2159 =1827	=970 =3321	=1253 =-4038	=-3925 =3249	=6012 =-714	=-6369 =6973	=4239 =-9242	=243 =8499	=-5830 =-4088	=10499 =-2438	=-12067 =9427	=9265 =-13836	=-2421 =13456	=-6314 =-7655	=13696 =-1844	=-16213 =11541	=12463 =-17333	=-3236 =16323	=-8116 =-8340	=16885 =-3801	=-19034 =15102	=13083 =-20491	=-1025 =17174	=-12200 =-4922	=20741 =-6963	=-20436 =9463	
64-95	=11476 =-22945	=-23832 =10469	=25445 =-7291	=-15135 =22271	=-2704 =2728	=19829 =-19430	=-28955 =16667	=23199 =-28049	=-7077 =26319	=-12885 =-11891	=27150 =-8587	=-28702 =25407	=16446 =-30293	=4015 =-20295	=-22939 =31072	=31072 =-24261	=-24261 =5522	=16177 =-31085	=-30283 =27319	=29721 =-10161	=-14573 =12194	=-7918 =-28790	=26683 =31422	=-32406 =-18612	=22219 =-3496	=24004	
96-127	=-30156 =13320	=31390 =-9999	=-16989 =-28286	=-6126 =32344	=28001 =-20125	=-32754 =-2236	=22946 =29407	=-1548 =-32702	=-30879 =25388	=32166 =-5200	=-27390 =17547	=9831 =-31257	=14365 =-29020	=-29984 =11927	=30215 =-11159	=-14983 =-29426	=-7901 =31030	=-26566 =-17716	=-31590 =-4652	=20196 =24481	=1444 =-31617	=-22228 =22378	=31396 =-1652	=-24283 =-19787	=4652 =30871	=17288 =-25940	
128-159	=15138 =-26264	=6596 =-29608	=-24790 =17300	=29874 =-3621	=16303 =-22985	=-1292 =29900	=-21092 =-21092	=-1279	=-29738 =19079	=-22670 =-29293	=-3769 =24046	=-16982 =-6171	=28995 =-14949	=-25225 =27923	=9489 =-26173	=12628 =10668	=-26952 =-10401	=-26958 =-25838	=-12742 =27536	=-8116 =-14706	=24982 =-5869	=-27932 =23193	=16505 =-28153	=-21696 =18177	=28179 =-1395	=-19698 =-20102	
160-191	=26683 =-7035	=-24277 =12947	=8970 =-25936	=11044 =-20669	=-20599 =10827	=25689 =-9119	=-12586 =-24085	=-7142 =26140	=-22972 =-14288	=-26478 =-5174	=15816 =-21764	=3227 =-26524	=-20452 =17277	=26683 =1275	=-18621 =-19056	=642 =26588	=17602 =-19836	=-26332 =2529	=20949 =-25978	=-4389 =21933	=-14466 =-6171	=25475 =-12826	=-22793 =24965	=7944 =-23540	=11138 =-9609	=-2416 =9609	
192-223	=4184 =-25280	=-20280 =15596	=25390 =-2451	=-16881 =19069	=-678 =-25416	=17810 =-18063	=-25306 =1061	=19180 =16485	=-2743 =-25079	=-15076 =20173	=24757 =-4428	=-21073 =-13638	=6074 =24313	=12167 =-21855	=-23770 =7655	=22566 =10612	=-9197 =-23124	=-9077 =23121	=22384 =-10697	=-22384 =-7476	=-23905 =21556	=12115 =-23975	=5879 =13482	=-20644 =4246	=24238 =-19657	=-14769 =24394	
224-255	=-19147 =-14946	=3795 =23975	=13632 =-20021	=-23898 =5388	=-30896 =12255	=-6794 =-23163	=-10859 =21514	=22805 =-8262	=-9794 =-9431	=-10859 =21859	=22805 =-22628	=-9794 =11064	=-10859 =6454	=-10859 =-20490	=-18543 =23339	=-22566 =-13641	=14836 =-3418	=1895 =18883	=-18543 =-23673	=-19475 =15972	=4129 =-360	=-12427 =-9073	=-22228 =7181	=19953 =-15387	=-6982 =20901	=-9989 =-8272	=21271 =-21524
256-287	=-21819 =8424	=21631 =-8827	=-9739 =-21219	=7389 =22108	=20330 =-11031	=-22475 =-5976	=12288 =19735	=4535 =-22780	=-18968 =13485	=-22988 =-3074	=-14615 =-17953	=-1636 =23063	=18969 =-15683	=-23085 =-185	=16687 =19307	=-1272 =-23011	=-14794 =17618	=22832 =-2704	=-18475 =-13645	=4129 =22536	=-12427 =-19264	=-22228 =5522	=19953 =11174	=-6982 =-21771	=-9989 =20582	=21271 =-8226	
288-319	=-4444 =22189	=18401 =-13096	=-22371 =-3061	=14200 =17511	=1645 =-22469	=-16570 =-15219	=22469 =249	=-16200 =-15550	=1149 =-22400	=14482 =-17096	=-22254 =2535	=17923 =-13372	=-3879 =-21995	=-12213 =18660	=21644 =-5256	=-19329 =-10992	=6548 =-21248	=9746 =-19946	=-20732 =7837	=20475 =-8496	=-9073 =-20177	=7181 =20901	=-15387 =-8272	=20901 =-8272	=-15387 =-8272	=20901 =-8272	

**Carrier Type:** TSS  SNR  QLN  HLIN  HLOG

**The HLOG formula:  $6-(value/10)(dB)$ .Real values in dB for each carrier over the Upstream passband.(Near-END)**

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
0-31	251	1023	776	776	776	673	262	138	39	39	35	27	23	23	25	28	34	40	46	53	61	70	78	87	96	105	113	122	130	137	144	152
32-63	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023

**The HLOG formula:  $6-(value/10)(dB)$ .Real values in dB for each carrier over the Downstream passband.(Far-END)**

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
0-31	850	450	490	490	520	520	520	520	560	560	560	520	560	560	560	560	610	620	520	570	510	490	470	430	410	390	370	340	320	300	280	
32-63	260	250	230	210	200	180	170	160	150	140	140	130	120	120	120	110	110	100	100	100	100	90	90	90	90	80	80	80	80	80	80	70
64-95	70	70	70	70	70	60	60	60	60	60	60	60	60	60	60	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
96-127	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
128-159	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
160-191	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
192-223	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
224-255	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	
256-287	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	
288-319	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
320-351	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	
352-383	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	
384-415	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	
416-447	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
448-479	120	120	120	120	120	120	120	120	120	130	130	130	130	130	130	130	130	130	140	140	140	140	140	140	140	140	140	140	140	140	140	
480-511	160	170	170	170	170	180	180	180	180	190	190	190	190	190	200	200	200	210	210	210	210	210	210	210	210	210	210	210	210	210	210	

### 4.4.2.3 Carrier Data

This option allows you to view the ADSL line carrier data. From the *ADSL* menu, click on *Data & Inventory* and then *Carrier Data*. The following page is displayed.

Select the line port (1 ~ 24) and carrier type (LOAD or GAIN). Then click on **Query** button. Note that if the line port is still in loop testing status, you cannot query the carrier data.

#### ADSL Carrier Data

Port: <input type="text" value="2"/>	Type: <input checked="" type="radio"/> LOAD <input type="radio"/> GAIN	<input type="button" value="Query"/>																															
<b>The LOAD formula: load=value*(1/256).The bit LOAD distribution over Downstream passband.(Near-END)</b>																																	
Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
0~31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
32~63	0	6	6	7	8	8	9	9	10	10	11	10	11	11	12	12	12	12	13	13	13	13	14	13	14	14	14	14	14	15	14	15	
64~95	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	13	15	15	15	15	15	15	15	15	15	
96~127	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
128~159	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
160~191	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
192~223	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
224~255	14	15	15	15	2	15	15	15	15	15	15	14	15	15	15	15	14	15	15	15	15	14	15	15	15	15	15	15	15	15	15	14	15
256~287	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
288~319	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
320~351	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	14	
352~383	15	15	15	15	15	15	14	15	15	15	15	15	15	14	15	15	15	14	15	15	15	14	15	15	15	14	15	14	15	15	14	15	
384~415	0	0	15	14	15	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	14	14	15	14	15	14
416~447	15	14	14	15	14	15	14	14	15	14	15	14	14	15	14	14	15	14	14	14	15	14	14	15	14	14	14	14	14	15	14	14	14
448~479	0	0	15	14	14	14	14	14	14	14	14	14	14	14	14	13	14	14	13	14	14	13	14	13	13	14	13	13	13	14	13	13	
480~511	13	13	13	13	12	13	12	13	12	12	12	12	12	12	12	11	11	11	10	11	10	10	9	9	9	7	7	6	6	3	2	0	
<b>The LOAD formula: load=value*(1/256).The bit load distribution over Upstream passband.(Far-END)</b>																																	
Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
0~31	0	0	0	0	0	0	0	8	9	11	11	12	13	13	14	14	14	14	15	15	15	15	15	15	15	14	14	13	12	11	11	9	
32~63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Port: 2		Type: LOAD <input type="radio"/> GAIN <input checked="" type="radio"/>		Query																													
<b>The GAIN formula: gain=value*(1/512).The GAIN allocation over the Downstream passband.(Near-END)</b>																																	
Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
0~31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
32~63	0	482	394	469	541	455	541	469	573	496	625	394	496	455	590	541	482	442	590	541	482	455	625	406	541	511	482	469	455	608	418	573	
64~95	573	482	526	496	482	482	469	455	430	442	442	418	418	418	406	418	406	406	406	406	406	442	469	496	394	406	394	394	394	406	406	406	
96~127	406	406	406	394	406	406	418	406	406	406	406	418	418	418	430	430	430	430	430	430	430	442	442	442	442	455	455	455	455	469	469	482	
128~159	469	482	482	482	482	482	511	526	482	496	482	496	496	496	482	496	482	496	482	482	469	482	469	482	482	469	469	455	469	455	455	455	
160~191	455	455	455	455	455	455	455	455	455	469	455	469	455	455	482	469	455	469	455	455	455	469	482	469	469	469	469	469	469	469	455	469	482
192~223	469	469	482	482	482	482	482	496	496	482	496	496	496	496	496	511	496	511	496	496	496	496	511	511	496	496	526	526	496	526	526	511	
224~255	372	511	526	526	511	511	526	526	526	526	541	372	541	541	526	541	383	541	541	557	526	383	526	541	526	511	526	511	526	526	372	608	
256~287	394	482	482	496	482	482	482	482	496	496	496	496	496	526	496	496	496	496	482	482	482	482	482	482	469	469	469	482	469	469	482	482	
288~319	455	469	482	482	482	482	482	482	482	482	496	496	496	482	496	482	482	496	496	496	496	496	496	496	496	496	496	496	496	496	496	496	
320~351	496	496	511	496	496	511	496	496	496	511	511	511	511	526	511	496	511	511	511	526	511	526	511	511	511	511	511	511	511	526	526	383	
352~383	526	526	526	541	526	526	383	526	526	526	526	541	526	383	541	541	541	394	541	541	557	383	557	557	541	406	557	406	557	573	406	573	
384~415	557	406	573	406	573	573	418	573	406	590	406	590	418	573	418	590	406	590	418	590	418	608	430	608	430	590	430	430	590	430	608	430	
416~447	608	430	430	608	430	608	430	430	608	442	625	442	442	625	442	442	625	455	442	455	625	455	455	644	455	455	455	469	644	469	469	482	
448~479	482	482	681	496	496	496	511	496	496	496	526	511	541	526	541	383	541	557	406	557	590	418	590	430	430	625	442	455	455	662	482	482	
480~511	496	511	526	541	394	590	418	608	455	469	482	511	541	557	573	442	469	541	418	625	496	557	418	496	541	430	496	469	590	482	394	0	
<b>The GAIN formula: gain=value*(1/512).The gain allocation over the Upstream passband.(Far-END)</b>																																	
Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
0~31	0	0	0	0	0	0	0	556	444	494	467	465	524	505	556	540	466	431	524	479	453	458	466	481	528	433	527	447	448	513	556	592	
32~63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

#### 4.4.2.4 OP Data

This option allows you to view the ADSL line/channel operational data and carrier data. From the *ADSL* menu, click on *Data & Inventory* and then *OP Data*. The following page is displayed.

**Line Operational Data:** Click on *ADSL OP Data* drop-down list and select the item *Line (OP)*. Then select the line port (1 ~ 24). Click on **Query** button.

#### ADSL Line Operational Data

ADSL OP Data: Line (OP) Port-1 Query		
<b>ADSL LINE OP Data</b>	<b>NE US</b>	<b>FE DS</b>
<b>Rel Capacity Occupation</b>	109(%)	100(%)
<b>Noise Margin</b>	3.5(db)	8.0(db)
<b>Signal Attenuation</b>	1.5(db)	0.0(db)
<b>Loop Attenuation</b>	1.8(db)	0.0(db)
<b>ADSL LINE OP Data</b>	<b>NE DS</b>	<b>FE US</b>
<b>Output Power</b>	12.1(dbm)	9.5(dbm)
<b>Actual PSD</b>	-50.0(dbm/Hz)	-38.0(dbm/Hz)
<b>ADSL LINE OP Data</b>	<b>NE</b>	<b>FE</b>
<b>Line Status</b>	Run Showtime L0	N/A
<b>Actual Op Mode</b>	(992.1_A_Pots_NonOverlapped)	N/A
<b>ATUC Op Mode Capabilities</b>	(ANSI_T1413) (ETSI_DTS_TM06006 ) (992.1_A_Pots_NonOverlapped) (992.1_B_Isdn_NonOverlapped) (992.2_A_Pots_NonOverlapped) (992.3_A_Pots_NonOverlapped) (992.3_B_Isdn_NonOverlapped) (992.3_L_Pots_NonOverlapped_Mode1) (992.3_L_Pots_NonOverlapped_Mode2) (992.3_M_Pots_Extend_US_NonOverlapped) (992.5_A_Pots_NonOverlapped) (992.5_B_Isdn_NonOverlapped) (992.5_M_Pots_Extend_US_NonOverlapped)	(992.1_A_Pots_NonOverlapped) (992.2_A_Pots_NonOverlapped)



**Channel Operational Data:** Click on *ADSL OP Data* drop-down list and select the item *Channel (OP)*. Then select the port (1~24). Click on **Query** button. The following page is displayed.

ADSL Channel Operational Data

ADSL OP Data: Channel(OP) ▾ Port-1 ▾ Query		
<b>ADSL LINE OP Data</b>	<b>NE US</b>	<b>FE DS</b>
<b>Actual Bitrate(kbps)</b>	1120	8128
<b>Attainable Bitrate(kbps)</b>	1024	8128
<b>ADSL LINE OP Data</b>	<b>NE DS</b>	<b>FE US</b>
<b>Actual Interleaving Delay(ms)</b>	0	0
<b>Actual Impulse Noise Protection(Symbol)</b>	0.0	0.0

### 4.4.3 Line Config & Info

#### 4.4.3.1 Line Configuration

This option allows you to setup the ADSL line configuration. From the *ADSL* menu, click on *Line Config & Info* and then *Line Configuration*. The following page is displayed.

ADSL Line Configuration

ADSL Port from  to

Operational Mask Mode:  (0)ANSI\_T1413  
 (1)ETSI\_DTS\_TM06006  
 (2)992.1\_A\_Pots\_NonOverlapped

Carrier Data Mode:  (1)OFF

FORCE L3 Mode:  (0)OFF

---

ADSL Port from  to

Port	OP MASK ID	Op Mode Board Capability	Carrier Data	Loop Diagnostics	Force L3 Mode
1	ANSI_T1413 ETSI_DTS_TM06006 992.1_A_Pots_NonOverlapped 992.1_B_Isdn_NonOverlapped 992.2_A_Pots_NonOverlapped 992.3_A_Pots_NonOverlapped 992.3_B_Isdn_NonOverlapped 992.3_L_Pots_NonOverlapped_Mode1 992.3_L_Pots_NonOverlapped_Mode2 992.3_M_Pots_ExtUS_NonOverlapped 992.5_A_Pots_NonOverlapped 992.5_B_Isdn_NonOverlapped 992.5_M_Pots_ExtUS_NonOverlapped		OFF	OFF	OFF

#### ADSL Line Configuration

Label	Description
<b>ADSL Port From...To...</b>	Type in the line port range. Valid number: 1 ~ 24.
<b>Operational Mask Mode</b>	Select the Operational Mode(s) to be masked. Select the modes in the block by using mouse and Shift or Ctrl key. Select the check box and then click on <b>Modify</b> button.
<b>Carrier Data Mode</b>	<p>Click on this drop-down list and select the carrier data mode.</p> <p>Select the check box and then click on <b>Modify</b> button.</p> <p>OFF - Carrier data won't vary during show time.</p> <p>ON - Carrier data collection is active. The carrier data will be refreshed during show time.</p> <p>ON INIT - The ADSL facility is re-initialized and carrier data collection is active (will be refreshed).</p>

<b>FORCE L3 Mode</b>	Click on this drop-down list and select ON to force the ADSL port to enter power management L3 mode (Idle state). Select the check box and then click on <b>Modify</b> button.
<b>Modify</b>	Click on this button to submit modification.
<b>Query</b>	Click on this button to display current line configuration.

#### 4.4.3.2 Line Information

This option allows you to setup the ADSL line information. From the *ADSL* menu, click on *Line Config & Info* and then *Line Information*. The following page is displayed.

#### ADSL Line Information

ADSL Port from 1 To 5			
<input type="button" value="Modify"/>		<input type="button" value="Query"/>	
Port	Identifier	Phone No	Description
<input checked="" type="checkbox"/> 1	ADSL-1	886-32826433	Mak Office
<input type="checkbox"/> 2			
<input type="checkbox"/> 3			
<input type="checkbox"/> 4			
<input type="checkbox"/> 5			

#### ADSL Line Information

Label	Description
<b>ADSL Port From...To...</b>	Type in the line port range. Valid number: 1~24.
<b>Modify</b>	Click on this button to submit the modification once you have entered new value for the ADSL line information. Note that to modify an entry, you must select the checkbox on the leftmost column before you click on Modify.
<b>Query</b>	Once you have typed in the port number range, click on this button to display line information of these ports.
<b>Identifier</b>	Type in the ADSL line identifier. Up to 63 characters is allowed.
<b>Phone No</b>	Type in the phone number. Up to 63 characters is allowed.
<b>Description</b>	Type in any comment of this line. Up to 63 characters is allowed.

## 4.5 Traffic

### 4.5.1 ATM Traffic Descriptor

This option allows you to modify the traffic table. From the *Traffic* menu, click on *ATM Traffic Descriptor*. The following page is displayed:

**ATM Traffic Descriptor**

---

PCR	CDVT	SCR	MBS	TYPE			
20000	10000	0	0	Policed			
Descriptor: (2) [Policed CBR]atm<CLP> <Transparent> [NoSCR] <input type="button" value="Create"/>							
<input type="button" value="Delete"/>							
Delete Select	Row No.	ATM Traffic Descriptor	PCR	CDVT	SCR	MBS	TYPE
<input type="radio"/>	DEF	[Unshaped]atmNoTrafficDescriptor	0	0	0	0	SHAPED
[ ADSL PVC CONFIGURATION ]							

#### ATM Traffic Descriptor Setup

Label	Description
<b>PCR</b>	PCR stands for Peak Cell Rate (cells/second).
<b>CDVT</b>	CDVT stands for Cell Delay Variation Tolerance (microseconds).
<b>SCR</b>	SCR stands for Sustained Cell Rate (cells/second).
<b>MBS</b>	MBS stands for Maximum Burst Size (cells).
<b>TYPE</b>	This field will show Shaped or Policed depending on the descriptor type you select.
<b>Descriptor</b>	<p>Click on this drop-down list and select a descriptor type. After you select a descriptor type, the corresponding parameters (which are configurable) will be displayed on the top. Valid descriptor types are:</p> <p><b>[Unshaped] atmNoTrafficDescriptor:</b></p> <p>This identifies no ATM traffic descriptor type. This traffic descriptor type can be used for best effort traffic.</p> <p><b>[Policed CBR] atmCLPTransparentNoScr /</b></p> <p><b>[Shaped CBR] atmCLPTransparentNoScr:</b></p> <p>This traffic descriptor type is for the CLP- transparent model and no Sustained Cell Rate. This traffic descriptor type is applicable to connections following the CBR.1 conformance definition. Connections specifying this traffic descriptor type will be rejected at UNI 3.0 or UNI 3.1</p>

interfaces. For a similar traffic descriptor type that can be accepted at UNI 3.0 and UNI 3.1 interfaces, see "atmNoClpNoScr".

**[Policed VBR1] atmNoCLPScrCdvT:**

This traffic descriptor type is for no CLP with Sustained Cell Rate and CDVT. This traffic descriptor type is applicable to VBR connections following the UNI 3.0/3.1 conformance definition for PCR CLP=0+1 and SCR CLP=0+1. These VBR connections differ from VBR.1 connections in that the CLR objective applies only to the CLP=0 cell flow.

**[Policed VBR2] atmCLPNoTaggingScrCdvT /**

**[Shaped VBRNRT] atmCLPNoTaggingScrCdvT:**

This traffic descriptor type is for CLP with Sustained Cell Rate and CDVT and no tagging. This traffic descriptor type is applicable to connections following the VBR.2 conformance definition.

**[Policed VBR3] atmCLPTaggingScrCdvT:**

This traffic descriptor type is for CLP with tagging and Sustained Cell Rate and CDVT. This traffic descriptor type is applicable to connections following the VBR.3 conformance definition.

**[Policed UBR1] atmNoCLPNoScrCdvT:**

This traffic descriptor type is for no CLP with CDVT and no Sustained Cell Rate. This traffic descriptor type is applicable to

CBR connections following the UNI 3.0/3.1 conformance definition for PCR CLP=0+1. These CBR connections differ from CBR.1 connections in that the CLR objective applies only to the CLP=0 cell flow. This traffic descriptor type is also applicable to connections following the UBR.1 conformance definition.

**[Policed UBR2] atmNoCLPTaggingNoScr:**

This traffic descriptor type is for no CLP with tagging and no Sustained Cell Rate. This traffic descriptor type is applicable to connections following the UBR.2 conformance definition.

**[Shaped UBR] atmNoCLPNoScr:**

This traffic descriptor type is for no CLP and no Sustained Cell Rate

**[Shaped VBR] atmCLPTransparent:**

This traffic descriptor type is for the CLP- transparent model with Sustained Cell Rate. This traffic descriptor type is applicable to connections following the VBR.1 conformance definition. Connections specifying this traffic descriptor type will be rejected at UNI 3.0 or UNI 3.1 interfaces. For a similar traffic descriptor type that can be accepted at UNI 3.0 and UNI 3.1 interfaces, see "atmNoClpScr".

<b>Create</b>	Click on this button to create a new traffic descriptor.
<b>Delete</b>	When you want to delete a traffic descriptor, click on the radio button beside the row number to select the traffic descriptor and then click on the Delete button. Note that the default profile cannot be deleted.

## 4.6 SNMP

### 4.6.1 SNMP Community

This option allows you to configure the SNMP community that is the group that IDL-2402s and management stations running SNMP belong to. It helps define where information is sent. The community name is used to identify the group and serve as form of authentication. From the *SNMP* menu, click on *SNMP Community*. The following page is displayed.

#### SNMP Community

Select modify/delete	No.	Community Name	Access Mode
<input type="checkbox"/>	1	public	Read/Write

#### SNMP Community Setup

Label	Description
<b>New</b>	<p>Click on this button to create a new SNMP community. After you click on New, the following page is displayed. Type in the name of the SNMP community (up to 63 characters; note that community names beginning with a digital number are not allowed) and select the access mode (Read only or Read/Write). Then click on <b>Apply</b> button.</p>
<b>Access Mode</b>	Select the SNMP community access mode: Read only or Read/Write.
<b>Modify</b>	Click on this button to modify the community name.
<b>Delete</b>	Select an index and then click on this button to delete a community.



## 4.6.2 SNMP Target

This option allows you to configure the SNMP target to control where the SNMP traps (notifications) are sent. Traps are used to report an alarm or other asynchronous event about a managed IDL-2402 system. From the *SNMP* menu, click on *SNMP Target*. The following page is displayed.

### SNMP Target

Next No.[2]	<input type="button" value="New"/>
Target No:	No.1 (Addr:192.168.7.243) <input type="button" value="Query"/> <input type="button" value="Delete"/> <input type="button" value="Modify"/>
<b>No.1</b>	
<b>IP Address</b>	192 . 168 . 7 . 243
<b>Target Name</b>	123
<b>Target Tag</b>	123_Tag
<b>Address Port</b>	162
<b>Trap Version</b>	V1 <input type="radio"/> V2c <input checked="" type="radio"/>

### SNMP Community Setup

Label	Description
New	Click on this button to create a new SNMP target. After you click on New, the following page is displayed. Type in the IP Address, Name and Tag of the SNMP target, Address Port (Usually SNMP uses UDP port 161 for general SNMP messages and UDP port 162 for SNMP trap messages), and select Trap Version (V1 or V2c). Then click on Apply button. The Target Tag can be the same with a Notify Tag; you can select the Notify Tag in the <b>Use Notify Tag</b> field. The Notify Tag is created in the SNMP Notify table (see next section). When the Target Tag is the same with a Notify Tag, the SNMP notification with that Notify Tag is sent to the Target with the same tag.

	<div style="text-align: center;">SNMP Target</div> <hr/> <div style="border: 1px solid #ccc; padding: 5px;"> <div style="display: flex; justify-content: space-between; border-bottom: 1px solid #ccc;"> <span>Apply</span> <span>Back</span> </div> <table style="width: 100%; border-collapse: collapse;"> <tr style="background-color: #e1f5fe;"> <td style="width: 20%;"><b>To be created No.</b></td> <td><b>No.1</b></td> </tr> <tr> <td><b>Target Address</b></td> <td>0 . 0 . 0 . 0</td> </tr> <tr> <td><b>Target Name</b></td> <td>SnmpTargetName1</td> </tr> <tr> <td><b>Target Tag</b> <input checked="" type="radio"/></td> <td>SnmpTargetList1</td> </tr> <tr> <td><b>Address Port</b></td> <td>162</td> </tr> <tr> <td><b>Trap Version</b></td> <td>V1 <input type="radio"/> V2c <input checked="" type="radio"/></td> </tr> <tr> <td><b>Use Notify Tag</b> <input type="radio"/></td> <td> <div style="border: 1px solid #ccc; padding: 2px;"> <p style="text-align: center; margin: 0;">===== Related SNMP NOTIFY TAG =====</p> <p>(1)123_Tag</p> <p>(2)abc_Tag</p> </div> </td> </tr> </table> </div>	<b>To be created No.</b>	<b>No.1</b>	<b>Target Address</b>	0 . 0 . 0 . 0	<b>Target Name</b>	SnmpTargetName1	<b>Target Tag</b> <input checked="" type="radio"/>	SnmpTargetList1	<b>Address Port</b>	162	<b>Trap Version</b>	V1 <input type="radio"/> V2c <input checked="" type="radio"/>	<b>Use Notify Tag</b> <input type="radio"/>	<div style="border: 1px solid #ccc; padding: 2px;"> <p style="text-align: center; margin: 0;">===== Related SNMP NOTIFY TAG =====</p> <p>(1)123_Tag</p> <p>(2)abc_Tag</p> </div>
<b>To be created No.</b>	<b>No.1</b>														
<b>Target Address</b>	0 . 0 . 0 . 0														
<b>Target Name</b>	SnmpTargetName1														
<b>Target Tag</b> <input checked="" type="radio"/>	SnmpTargetList1														
<b>Address Port</b>	162														
<b>Trap Version</b>	V1 <input type="radio"/> V2c <input checked="" type="radio"/>														
<b>Use Notify Tag</b> <input type="radio"/>	<div style="border: 1px solid #ccc; padding: 2px;"> <p style="text-align: center; margin: 0;">===== Related SNMP NOTIFY TAG =====</p> <p>(1)123_Tag</p> <p>(2)abc_Tag</p> </div>														
<b>Target No.</b>	Click on this drop-down list and select the SNMP target number.														
<b>Query</b>	Select the target number and then click on this button to retrieve the information.														
<b>Delete</b>	Select the target number and then click on this button to delete a target.														
<b>Modify</b>	Select the target number and then click on this button to modify the target setting.														

### 4.6.3 SNMP Notify

This option allows you to setup the SNMP Notification (In SNMPv1, asynchronous event reports are called traps while they are called notifications in later versions of SNMP). From the *SNMP* menu, click on *SNMP Notify*. The following page is displayed.

SNMP Notify

---

Next No:[3]

Delete/Modify Notify No:

Select modify/delete	Notify#	Notify Name	Notify Tag
<input checked="" type="radio"/>	No.1	123	<input type="text" value="123_Tag"/>
<input type="radio"/>	No.2	abc	abc_Tag

**Table 0-2 SNMP Community Setup**

Label	Description						
<b>Notify No.</b>	This field shows the Notify number you select.						
<b>New</b>	<p>Click on this button to create a new SNMP Notify. After you click on New, the following page is displayed. Type in the name and tag of the SNMP Notify and click on <b>Apply</b> button.</p> <p>By specifying the Notify tag, you can bind the Notify name to the SNMP target address table. When the Notify tag is the same with the Target Tag in a SNMP target table (refer to previous section), the notification is sent to the corresponding Target address.</p> <p style="text-align: center;">SNMP Notify</p> <hr/> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px auto; width: 80%;"> <p style="text-align: right;"><input type="button" value="Apply"/> <input type="button" value="Back"/></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e1f5fe;"> <th colspan="2" style="text-align: left;">SNMP Notify No.3</th> </tr> </thead> <tbody> <tr> <td style="width: 20%;"><b>Notify Name</b></td> <td><input type="text" value="SnmNotifyName3"/></td> </tr> <tr> <td><b>Notify Tag</b></td> <td><input type="text" value="SnmNotifyTag3"/></td> </tr> </tbody> </table> </div>	SNMP Notify No.3		<b>Notify Name</b>	<input type="text" value="SnmNotifyName3"/>	<b>Notify Tag</b>	<input type="text" value="SnmNotifyTag3"/>
SNMP Notify No.3							
<b>Notify Name</b>	<input type="text" value="SnmNotifyName3"/>						
<b>Notify Tag</b>	<input type="text" value="SnmNotifyTag3"/>						
<b>Delete</b>	Select a row and then click on this button to delete a Notify.						
<b>Modify</b>	Select the row and type in new notify tag and then click on this button to submit the modification.						

## 4.7 Maintenance

### 4.7.1 SYS Log Server

This option allows you to configure the IP address of the SYS Log server which listens for incoming Syslog messages. From the *Maintenance* menu, click on *SYS Log Server*. The following page is displayed.

System Log Server

---

Modify Action: Stop ▼

**Change Server Address**      192 . 168 . 1 . 1

#### SYS Log Server Setup

Label	Description
<b>Current Server IP</b>	This field shows the IP address of current Sys Log server.
<b>Change Server Address</b>	Type in the new IP address of Sys Log server. The server must be a remote host.
<b>Modify</b>	To change SYS Log server address, click on this button once you have type in a new server IP address.
<b>Action</b>	Click on this drop-down list and select <b>Start</b> to start sending the Syslog messages to the server or <b>Stop</b> to stop sending the Syslog messages to the server.

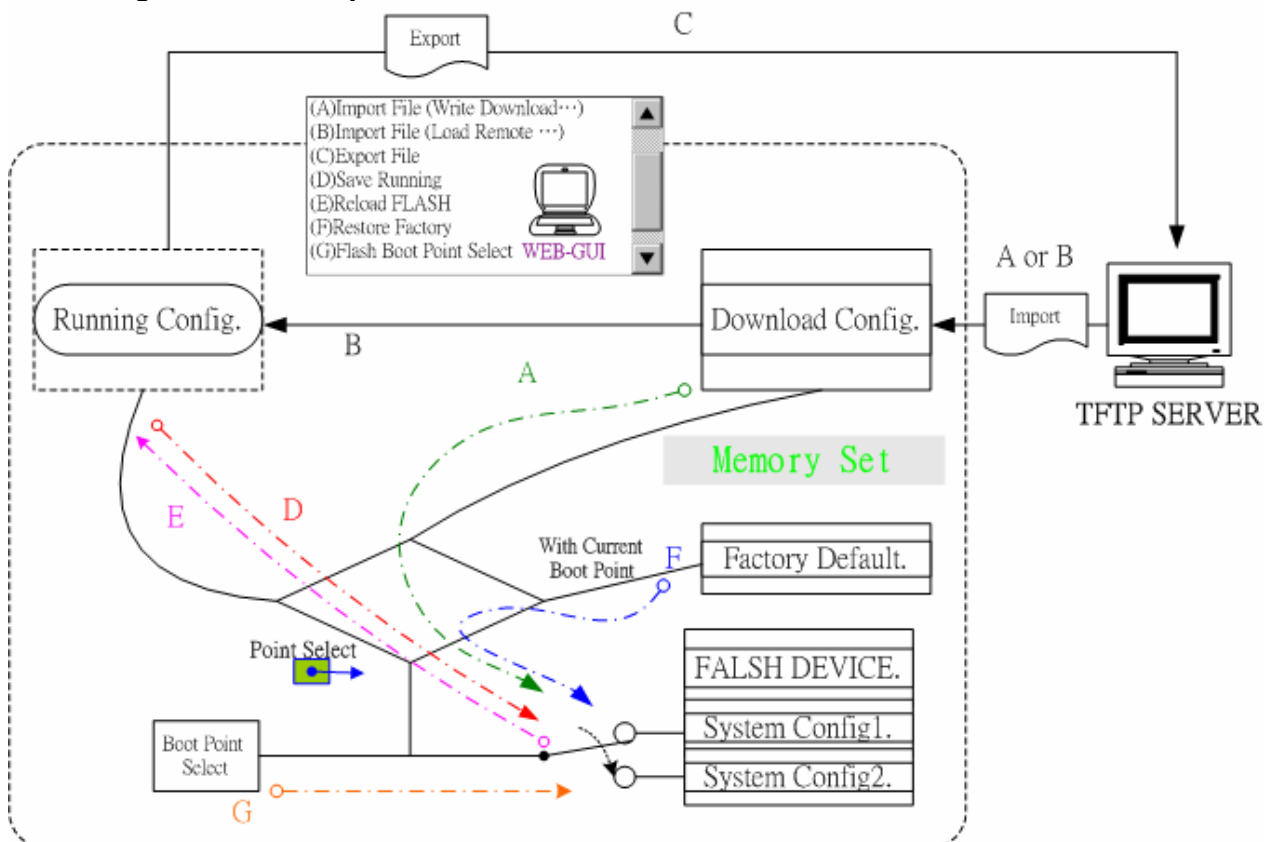
## 4.7.2 Database

This option allows you to import/export the configuration data. From the *Maintenance* menu, click on *Database*. The following page is displayed. Select the database configuration action you want to perform.

### Database Configuration

DB Config Select: [Select]
(A) Import File (Write Download Config To FLASH)
(B) Import File (Load Remote Config to Running Config)
(C) Export File (Put Running Config To Remote TFTP Server)
(D) Save Running Config to Flash (System Config)
(E) Reload FLASH (System Config) to Running Config
(F) Restore Factory Default
(G) Flash Boot Point Configuration Select

### DB Configuration Concept:



**(A) Import File (Write Download Config To Flash):**

Type in the TFTP Server IP address and the name of the file you want to download. Then click on **Get File** button.

[Database Configuration](#)

DB Config Select:	(A)Import File (Write Download Config To FLASH)	▼	
Write flash at:	Partition2	▼	
TFTP Server IP:	172.16.10.241	File Name: config1	Get File

**Write downloaded Config to Flash in progress:**

[Database Configuration](#)

DB Config Select:	(A)Import File (Write Download Config To FLASH)	▼	
Write flash at:	Partition2	▼	
TFTP Server IP:	172.16.10.241	File Name: config1	Get File
<b>Action Name</b>	WRITE_DOWNLOAD		
<b>Action Status</b>	MEMORY WRITE IN PROGRESS		

**Write to memory successfully:**

[Database Configuration](#)

DB Config Select:	(A)Import File (Write Download Config To FLASH)	▼	
Write flash at:	Partition2	▼	
TFTP Server IP:	172.16.10.241	File Name: config1	Get File
<b>Action Name</b>	WRITE_DOWNLOAD		
<b>Action Status</b>	MEMORY WRITE SUCCESS		

**Fail to Get File:**

DB Config Select:	(A)Import File (Write Download Config To FLASH)	▼	
Write flash at:	Partition2	▼	
TFTP Server IP:	172.16.10.28	File Name: config1	Get File
<b>Action Name</b>	GET_LOCAL		
<b>Action Status</b>	TFTP GET FAIL		

**(B) Import File (Load Remote Config to Running Config)**

Type in the TFTP Server IP address and the name of the file you want to download. Then click on **Get File** button.

[Database Configuration](#)

---

DB Config Select:	(B)Import File (Load Remote Config to Running Config)	
TFTP Server IP:	172.16.10.241	File Name: config1
		<input type="button" value="Get File"/>

**Load to Running Config successfully:**

[Database Configuration](#)

---

DB Config Select:	(B)Import File (Load Remote Config to Running Config)	
TFTP Server IP:	172.16.10.241	File Name: config1
		<input type="button" value="Get File"/>
<b>Action Name</b>	LOAD_REMOTE	
<b>Action Status</b>	MEMORY READ SUCCESS	

**Fail to Get File:**

[Database Configuration](#)

---

DB Config Select:	(B)Import File (Load Remote Config to Running Config)	
TFTP Server IP:	172.16.10.28	File Name: config1
		<input type="button" value="Get File"/>
<b>Action Name</b>	GET_LOCAL	
<b>Action Status</b>	TFTP GET FAIL	

**(C) Export File (Put Running Config to Remote TFTP Server)**

Type in the TFTP Server IP address and the name of the file you want to export. Then click on **Put File** button.

[Database Configuration](#)

---

DB Config Select: (C)Export File (Put Running Config To Remote TFTP Server) ▼		
TFTP Server IP: 172.16.10.241	File Name: config1	Put File

**TFTP put file successfully:**

[Database Configuration](#)

---

DB Config Select: (C)Export File (Put Running Config To Remote TFTP Server) ▼		
TFTP Server IP: 172.16.10.241	File Name: config1	Put File
<b>Action Name</b>	PUT_REMOTE	
<b>Action Status</b>	TFTP PUT SUCCESS	

**TFTP put file fail:**

[Database Configuration](#)

---

DB Config Select: (C)Export File (Put Running Config To Remote TFTP Server) ▼		
TFTP Server IP: 172.16.10.28	File Name: config1	Put File
<b>Action Name</b>	PUT_REMOTE	
<b>Action Status</b>	TFTP PUT FAIL	



**(D) Save Running Config to Flash (System Config)**

Click on the drop-down list and select partition, and then click on **Write\_Running** button to write running configuration to Flash.

[Database Configuration](#)

DB Config Select: (D)Save Running Config to Flash(System Config) ▼  
Write flash at: Partition2 ▼ Write\_Running

**Write running config to Flash successfully:**

[Database Configuration](#)

DB Config Select: (D)Save Running Config to Flash(System Config) ▼  
Write flash at: Partition2 ▼ Write\_Running

<b>Action Name</b>	WRITE_RUNNING
<b>Action Status</b>	MEMORY WRITE SUCCESS

**(E) Reload Flash to Running Config**

Click on the drop-down list and select partition, and then click on **LOAD\_FLASH** button to load configuration from Flash to Running Config.

[Database Configuration](#)

DB Config Select: (E)Reload FLASH(System Config) to Running Config ▼  
Load flash at: Partition2 ▼ LOAD\_FLASH

**Load configuration from Flash to Running Config successfully:**

[Database Configuration](#)

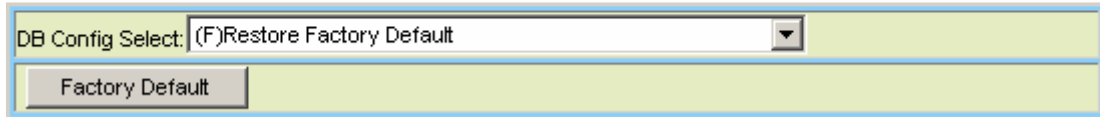
DB Config Select: (E)Reload FLASH(System Config) to Running Config ▼  
Load flash at: Partition2 ▼ LOAD\_FLASH

<b>Action Name</b>	LOAD_FLASH
<b>Action Status</b>	MEMORY READ SUCCESS

**(F) Restore Factory Default**

Click on **Factory\_Default** button to restore factory default configuration.

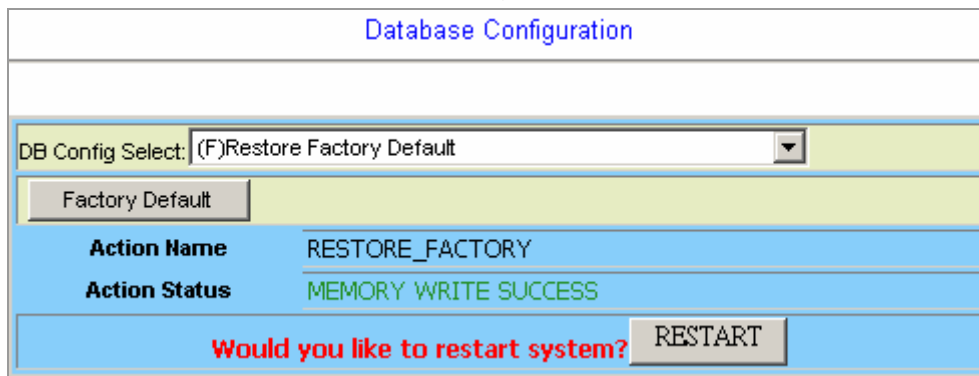
Database Configuration



DB Config Select: (F)Restore Factory Default

Factory Default

After loading default configuration to Flash successfully, you must click on **RESTART** button to restart the system so that the configuration can take effect.



Database Configuration

DB Config Select: (F)Restore Factory Default

Factory Default

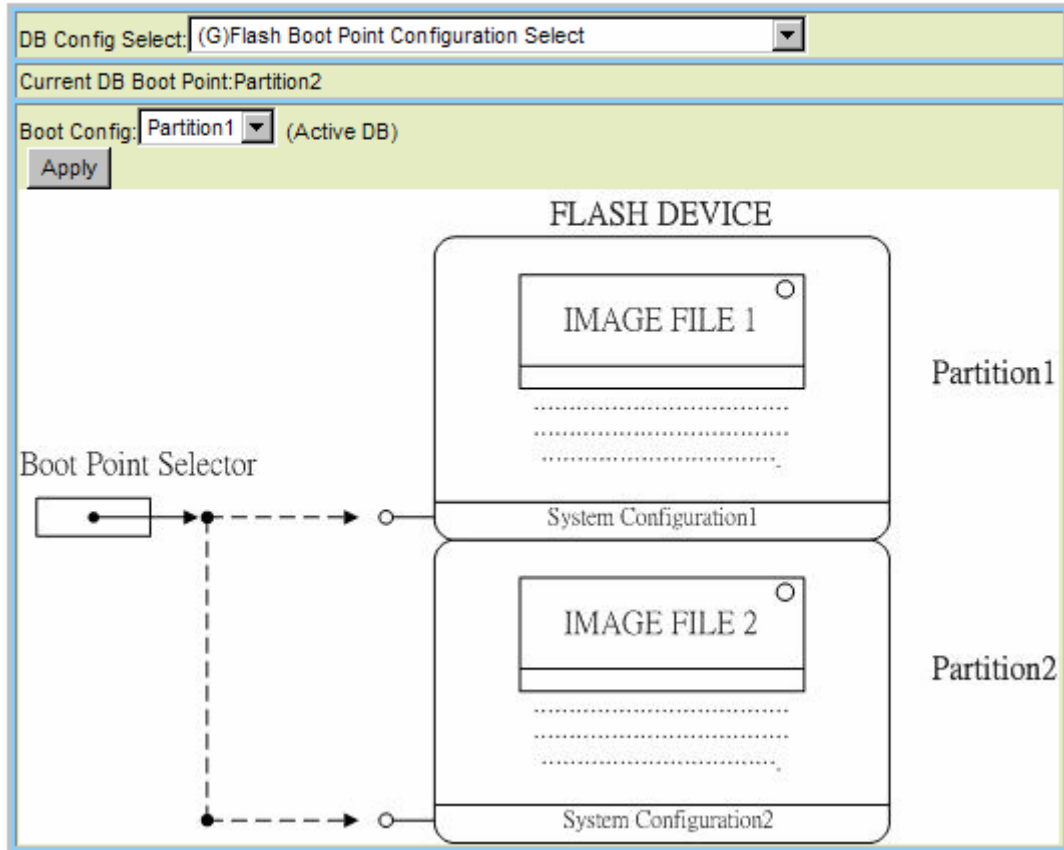
<b>Action Name</b>	RESTORE_FACTORY
<b>Action Status</b>	MEMORY WRITE SUCCESS

Would you like to restart system? RESTART

### (G) Flash Boot Point Configuration Select

Click on the *Boot Config* drop-down list and select the partition (Partition1 or Partition2) as the boot point. Click on **Apply** button and then restart the system. The system will restart and load the configuration in the partition you select into the running configuration.

#### Database Configuration



### 4.7.3 Firmware Update

This option allows you to ftp get the firmware from a server and write to flash for updating the system firmware. From the *Maintenance* menu, click on *Firmware Update*. The following page is displayed.

Firmware Update			
<b>Remote FTP Server IP</b>	172 . 16 . 10 . 219 ; 21		
<b>Server User Name</b>	[ share ]		
<b>Server Password</b>	[ ***** ]		
<b>File Name</b>	[ vmlinux_u2402_1.00B0 ]		
<b>Firmware Update Status</b> No Action[0]			
Firmware Partition Select: <input type="button" value="Partition 2"/>			
Once system has 2 versions, an operator can use Partition Select from 1 to 2, vice versa. (e.g)Partition changes from version A.a to version B.b			
<b>Partition Location</b>	<b>Version</b>	<b>Build Date</b>	<b>Status</b>
<b>Partition:1</b>	1.00B05	2008/6/18	----
<b>Partition:2</b>	1.00B05	2008/8/29	Active
<b>Current Version</b>	1.00B05		
<b>1.[Warning]Upgrading firmware may take a few minutes, please don't turn off or reset the system.</b>			
<b>2.Once the system has upgraded already, please restart it!</b>			

#### Firmware Update

Label	Description
<b>Firmware Update</b>	Once you have typed in the parameter values, click on this button to start firmware update.
<b>Remote FTP Server IP</b>	Type in the IP address of the FTP server.
<b>Server User Name</b>	Type in the ftp user name.
<b>Server Password</b>	Type in the ftp password.
<b>File Name</b>	Type in the firmware filename.
<b>Firmware Update Status</b>	This field shows current status of firmware update process.
<b>Firmware Partition Select</b>	Select firmware memory partition (Partition 1 or 2). If you change to the other partition (not current partition), the system will restart immediately.

<b>Partition Information</b>	This section displays the partition information including firmware version, updating date, and status (active or not). Note that active partition means the partition for next power-up, not current partition in use. You can refer to <b>Current Version</b> to know which partition is the current partition in use. When you update the firmware, new firmware will be written to the partition that is not currently in use.
------------------------------	---

### FTP Get in progress:

The following message is displayed during getting file from FTP server.

```
incoming cluster id 0
FTP SERVER IP=172.16.10.219
Waiting for FTP Session (about 30 sec..)
```

### Firmware Write in progress:

The Flash Write process may take a few minutes; **you must not turn off or reset the system during the process.**

<b>Current Service</b>	share@172.16.10.219, vmlinux u2402 1.00B05
<b>Firmware Update Status</b>	- FLASH WRITE IN PROGRESS -
	<b>1.[Warning]Upgrading firmware may take a few minutes, please don't turn off or reset the system.</b>
	<b>2.Once the system has upgraded already, please restart it!</b>

### Firmware Write successfully:

When the Flash Write process has completed successfully, the Firmware Update Status shows "Firmware has upgraded already". You can now restart the system.

#### Firmware Update

Firmware Update			
Remote FTP Server IP	. . . . . ; 21		
Server User Name	[ ]		
Server Password	[ ]		
File Name	[ ]		
Firmware Update Status	<b>Firmware has upgraded already[7]</b>		
Firmware Partition Select:	Partition 2 <input type="button" value="v"/>		
Once system has 2 versions, an operator can use Partition Select from 1 to 2, vice versa. (e.g)Partition changes from version A.a to version B.b			
Partition Location	Version	Build Date	Status
Partition:1	1.00B05	2008/6/18	-----
Partition:2	1.00B05	2008/8/29	Active
Current Version	1.00B05		
<b>1.[Warning]Upgrading firmware may take a few minutes, please don't turn off or reset the system.</b>			
<b>2.Once the system has upgraded already, please restart it!</b>			

#### 4.7.4 ATM Loopbacks

This option allows you to modify the ATM F4/F5 entries or send the diagnostic entry. From the *Maintenance* menu, click on *ATM Loopbacks*. The following page is displayed:

[ATM Loopback](#)

OAM Cell Generation Disabled: <input checked="" type="radio"/> Enabled: <input type="radio"/> <input type="button" value="Apply"/>							
Port 01~12 <input type="button" value="Create"/> <input type="button" value="Query"/> <input type="button" value="Delete"/>							
Select	Port	LoopBack ID				Test Type	Status
<input checked="" type="checkbox"/>	ADSL Port1-PVC1	00000000	00000000	00000000	00000000	F5 E2E <input type="button" value="v"/>	FAIL
<input type="checkbox"/>	ADSL Port2-PVC1	00000000	00000000	00000000	00000000	--Select-- <input type="button" value="v"/>	----
<input type="checkbox"/>	ADSL Port3-PVC1	00000000	00000000	00000000	00000000	--Select-- <input type="button" value="v"/>	----
<input type="checkbox"/>	ADSL Port4-PVC1	00000000	00000000	00000000	00000000	--Select-- <input type="button" value="v"/>	----
<input type="checkbox"/>	ADSL Port5-PVC1	00000000	00000000	00000000	00000000	--Select-- <input type="button" value="v"/>	----
<input type="checkbox"/>	ADSL Port6-PVC1	00000000	00000000	00000000	00000000	--Select-- <input type="button" value="v"/>	----

#### ATM Loopbacks Setup

Label	Description
<b>OAM Cell Generation</b>	Click on the radio button to Disable/Enable OAM Cell Generation. Then click on <b>Apply</b> button to submit the setting.
Port 01~12 <input type="button" value="v"/> PVC-1 <input type="button" value="v"/>	Click on the drop-down lists to select port range and PVC (1 ~ 8).
<b>Create</b>	Click on this button to create a loopback setting. <i>Note:</i> make sure the interface has been setup and the service state of the circuit is turned on.
<b>Query</b>	Click on this button to query the loopback status.
<b>Delete</b>	Click on this button to delete a loopback entry.
<b>Select</b>	Click on the checkbox to select the PVC you want to create or delete the loopback setting for.
<b>Port</b>	This field shows the line port and PVC number.
<b>LoopBack ID</b>	Type in a loopback ID (32 digit).
<b>Test Type</b>	Select the loopback type: F5 E2E or F5 Segment.
<b>Status</b>	This field shows current loopback testing status. Possible values are: Fail, Success, In Progress, or ----.

## 4.7.5 Fault Management

### 4.7.5.1 Alarm/Event

This option allows you to query current alarm, history alarm, and event log. From the *Maintenance* menu, click on *Fault Management* and then *Alarm/Event*. The *Current Alarm* page is displayed. Click on the *Alarm/Event Select* drop-down list and select Current Alarm, History Alarm, or Event Log to view.

#### Current Alarm:

Type in the range of rows (1 ~ 1024) and then click on the **Query** button.

#### Current Alarm

Alarm/Event Select <input type="text" value="Current Alarm"/>						
Row Form <input type="text" value="1"/> To <input type="text" value="2"/>						
No range from 1 to 1024 <input type="button" value="Query"/>						
Row	ID	Description	Level	State	Sequential	Time
1	116	[NT-SLOT]SYS_FAN	MN	Set	1	2008/06/04 01:44:28
2	117	[NT-SLOT]SYS_FAN	MN	Set	2	2008/06/04 01:44:28

**Current Alarm Table**

Label	Description
<b>Query</b>	Click on this button to get most recent data.
<b>Row</b>	This field shows the row number.
<b>ID</b>	This field shows the alarm ID.
<b>Description</b>	This field shows the description for the alarm.
<b>Level</b>	This field shows the alarm level. Valid values are: MJ: major alarm. MN: minor alarm.
<b>State</b>	This field shows the alarm state: Set or Clear.
<b>Sequential</b>	Sequential number.
<b>Time</b>	Alarm occurring date and time.



## History Alarm:

### History Alarm

Alarm/Event Select <span>History Alarm</span>						
<input type="button" value="Query"/> <input type="button" value="Clear History"/>						
Row	ID	Description	Level	State	Sequential	Time
71	620	[Port:17],ADSL_NOPEER_FE	MN	Set	327	2008/06/23 04:23:49
70	620	[Port:48],ADSL_NOPEER_FE	MN	Set	326	2008/06/23 04:23:49
69	620	[Port:47],ADSL_NOPEER_FE	MN	Set	325	2008/06/23 04:23:49

**History Alarm Table**

Label	Description
<b>Query</b>	Click on this button to query history alarms.
<b>Clear History</b>	Click on this button to clear the alarm history table.
<b>Row</b>	This field shows the row number.
<b>ID</b>	This field shows the alarm ID.
<b>Description</b>	This field shows the description for the alarm.
<b>Level</b>	This field shows the alarm level. Valid values are: MJ: major alarm. MN: minor alarm.
<b>State</b>	This field shows the alarm state: Set or Clear.
<b>Sequential</b>	Sequential number.
<b>Time</b>	Alarm occurring date and time.

## Event Log:

Type in the range of rows and then click on the **Query** button.

### Event Log

Alarm/Event Select <input type="text" value="Event Log"/>				
<input type="button" value="Query"/> <input type="button" value="Clear Event"/>				
Row	ID	Description	Sequential	Time
0	14	[System]TRUNK_CARD_SOFTWARE_ACO_BUTTON_CLEAR	2	2008/04/02 03:47:33
1	1	TRUNK_CARD_RESTART	1	2008/04/02 03:47:33

### Event Log

Label	Description
<b>Query</b>	Click on this button to query most recent event log.
<b>Clear Event</b>	Click on this button to clear the event log.
<b>Row</b>	This field shows the row number.
<b>ID</b>	This field shows the event ID.
<b>Description</b>	This field shows the description for the event.
<b>Sequential</b>	Sequential number.
<b>Time</b>	Event occurring date and time.

### 4.7.5.2 Alarm Profile

This option allows you to view and update the alarm profiles. From the *Maintenance* menu, click on *Fault Management* and then *Alarm profile*. The *Alarm Profile* page is displayed. Click on the *Select Page* drop-down list and select a page to display.

To modify an alarm profile, click on the radio button beside the alarm ID, select the Level (Major/Minor), Mask/Unmask, and then click on the **Modify** button. You can also select the *ALL ID* checkbox to modify all alarm types at a time.

#### Alarm Profile

Select Page: ---Page 1 of 1---							
Selected Alarm ID: [ 104      SYS_FAN      ]							
Level: MINOR		UnMask		ALL ID: <input type="checkbox"/>		Modify	
ID	Type	Level	Mask	ID	Type	Level	Mask
<input checked="" type="radio"/> 104	SYS_FAN	MN	UnMask	<input type="radio"/> 105	SYS_SELFTESTFAILED	MN	UnMask
<input type="radio"/> 106	SYS_ABOVETEMP	MN	UnMask	<input type="radio"/> 107	SYS_BELOWTEMP	MN	UnMask
<input type="radio"/> 118	SYS_DSP	MN	UnMask	<input type="radio"/> 601	ADSL_LOS	MN	UnMask
<input type="radio"/> 602	ADSL_LOF	MN	UnMask	<input type="radio"/> 603	ADSL_LOM	MN	UnMask
<input type="radio"/> 610	ADSL_LCD	MN	UnMask	<input type="radio"/> 612	ADSL_NCD	MN	UnMask
<input type="radio"/> 613	ADSL_LOS_FE	MN	UnMask	<input type="radio"/> 614	ADSL_LOF_FE	MN	UnMask
<input type="radio"/> 615	ADSL_LOM_FE	MN	UnMask	<input type="radio"/> 616	ADSL_LOPWR_FE	MN	UnMask
<input type="radio"/> 619	ADSL_COMMF_FE	MN	UnMask	<input type="radio"/> 620	ADSL_NOPEER_FE	MN	UnMask
<input type="radio"/> 622	ADSL_LCD_FE	MN	UnMask	<input type="radio"/> 624	ADSL_NCD_FE	MN	UnMask

### 4.7.5.3 Hardware Temperature

This page allows you to:

- view current system temperature
- set several temperature and time thresholds (see description in the following table)

From the *Maintenance* menu, click on *Fault Management* and then *Hardware Temp*. The following page is displayed:

#### Temperature Threshold

Modify						
Current Temperature (°C)	Up Shift Threshold (°C)	Up Shift Time (Sec)	Down Shift Threshold (°C)	Down Shift Time (Sec)	Fan ON Threshold (°C)	Fan Shift Time (Sec)
70	65	10	-40	10	-40	64590
If current temperature <b>exceeds/descends</b> Up/Down Shift Threshold, Alarm Manager will declare that there is a <b>high/lower</b> temperature alarm after Up/Down ShiftTime seconds.						
[ <a href="#">ALARM/EVENT</a> ]						

#### Temperature Configuration

Label	Description
<b>Modify</b>	Click on this button to submit the update once you have entered all the new threshold values.
<b>Current Temperature (°C)</b>	This field shows the current system temperature.
<b>Up Shift Threshold (°C)</b>	The system will produce notification (alarm) when the monitored system temperature is higher than Up Shift Threshold (-55~85 °C) for over Up Shift Time (1~255 sec).
<b>Up Shift Time (Sec)</b>	Refer to the description for Up Shift Threshold.
<b>Down Shift Threshold (°C)</b>	The system will produce notification (alarm) when the monitored system temperature is lower than Down Shift Threshold (-55~85 °C) for over Down Shift Time (1~255 sec).
<b>Down Shift Time (Sec)</b>	Refer to the description for Down Shift Threshold.
<b>Fan ON Threshold (°C)</b>	FAN Enable temperature threshold (-40~15 °C). When the system temperature is higher than the threshold, the fan will be turned on automatically.
<b>Fan Shift Time (Sec)</b>	This field shows the elapsed time since the FAN was turned on.

## 4.7.6 Performance Monitoring

### 4.7.6.1 System Utilization

This option allows you to monitor the memory utilization and network processor utilization. From the *Maintenance* menu, click on *Performance Monitoring* and then *System Utilization*. The following page is displayed.

#### System Utilization

Current Memory Utilization	
(0)Parameter Bus(ZBT)	21.0%
(1)Packet Bus(SDRAM)	0.0%
(2)Host Bus(SDRAM)	0.0%
Current CPU Utilization	
(3)WinGine1	41.6%
(4)WinGine2	8.3%
(5)Average Loading	25.0%
(6)Idle	75.0%

### 4.7.6.2 Ethernet Statistics

This option allows you to view the Gigabit Ethernet counter values for the trunk or line interface. From the *Maintenance* menu, click on *Performance Monitoring* and then *Ethernet Statistics*. Click on the leftmost drop-down list to select interface (giga port or DSL line port); if line interface is selected, you must further click on the middle and rightmost drop-down list to select the line port number and PVC number. At last, click on **Query** to get data of that interface.

**GBE interface:**

**Ethernet Statistics**

GIGA Port XDSL Port-1 PVC-1 Query	
Statistics Name	Giga Port 1
MTU Size	1536
Queue LEN	0
Last Change	0
Specification	D
Description	Giga Ethernet
Input Bytes	0
Input Broadcast Packets	101827
Input Discard Packets	911
Input Multicast Packets	1472
Input Unicast Packets	4575
Input Not Unicast Packets	103299
Input Error Packets	0
Input Unknown Protocol Packets	0
Output Bytes	0
Output Broadcast Packets	11
Output Discard Packets	0
Output Multicast Packets	0
Output Unicast Packets	4549
Output Not Unicast Packets	11
Output Error Packets	0

## ADSL line PVC:

### Ethernet Statistics

Statistics Name	XDSL Port
MTU Size	1536
Queue Length	0
Last Change	0
Specification	L
Description	ATM
Input Bytes	0
Input Broadcast Packets	0
Input Discard Packets	0
Input Multicast Packets	0
Input Unicast Packets	0
Input Not Unicast Packets	0
Input Error Packets	0
Input Unknown Protocol Packets	0
Output Bytes	1749
Output Broadcast Packets	66
Output Discard Packets	27102
Output Multicast Packets	0
Output Unicast Packets	0
Output Not Unicast Packets	66
Output Error Packets	0

### 4.7.6.3 ATM Statistics

This option allows you to query the ATM Statistics. From the *Maintenance* menu, click on *Performance Monitoring* and then *ATM Statistics*. The following page is displayed.

ATM Statistics

ADSL Port	1	Show	Tx Cells	Query
Auto Update <input type="checkbox"/>				
<b>ATM Cell Name</b>	<b>Port:1</b>			
(12)Tx_cells	0000000000000001			
(13)Tx_clp1_cells	0000000000000000			
(14)Tx_efci_cells	0000000000000000			
(15)Tx_oam_cells	0000000000000001			
(16)Tx_rm_cells	0000000000000000			
(17)Tx_clp0_cells	0000000000000001			

#### Query ATM Statistics

Label	Description
<b>ADSL Port</b>	Click on this button to select line port.
<b>Auto Update</b>	Click on this checkbox to auto update the displayed statistics.
<b>Show</b>	Click on this drop-down list to select Tx, Rx, or All (Tx & Rx) data.
<b>Query</b>	Click on this button to query current statistics.



#### 4.7.6.4 RMON

This option allows you to configure and query the RMON Statistics. The IDL-2402 supports performance statistics defined in RMON MIB groups 1 (Ethernet statistics), 2 (history control), 3 (alarm), and 9 (event) per RFC 2819 for all network uplink ports. From the *Maintenance* menu, click on *Performance Monitoring* and then *RMON*. The following page is displayed. Select type of RMON table in the drop-down list.

Remote Monitoring

---

Select Type [Select] ▼

RMON Table
(1)ETH Statistics
(2)History Control
(3)ETH History
(4)Alarm
(5)Event
(6)LOG

◆ **ETH Statistics**

This option is for displaying the Ethernet interface RMON data. Click on the *Data Source* drop-down list and select GBE1. Type in an owner name and then click on **New** button to create a new ETH statistics entry. An owner is the entity that configured this entry and is therefore using the resources assigned to it.

**Remote Monitoring - ETH Statistics**

Select Type: ETH Statistics			
Next No: 4		Data Source: GBE1	
Owner: RMON4		NEW	
Query		Modify	
Delete			
<b>Index (Delete/Modify)</b>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
<b>Data Source</b>	GBE1	GBE1	GBE1
<b>Owner</b>	RMON1	RMON2	RMON3
<b>Rx DropEvents</b>	00000000	00000000	00000000
<b>Rx Bytes</b>	00000000	00000000	00000000
<b>Rx Packets</b>	00000000	00000000	00000000
<b>Rx BroadcastPkts</b>	00000000	00000000	00000000
<b>Rx MulticastPkts</b>	00000000	00000000	00000000
<b>Rx CRC Align Errors</b>	00000000	00000000	00000000
<b>Rx Undersize Pkts</b>	00000000	00000000	00000000
<b>Rx Oversize Pkts</b>	00000000	00000000	00000000
<b>Rx Fragments</b>	00000000	00000000	00000000
<b>Rx Jabbers</b>	00000000	00000000	00000000
<b>Tx Collisions</b>	00000000	00000000	00000000
<b>Tx/Rx Pkts 64bytes</b>	00008200	00008200	00008200
<b>Tx/Rx Pkts 65~127bytes</b>	00000000	00000000	00000000
<b>Tx/Rx Pkts 128~255bytes</b>	00000000	00000000	00000000
<b>Tx/Rx Pkts 256~511bytes</b>	00000000	00000000	00000000
<b>Tx/Rx Pkts 512~1023bytes</b>	00000000	00000000	00000000
<b>Tx/Rx Pkts 1024~1518bytes</b>	00000000	00000000	00000000
<b>Tx Bytes</b>	0C208000	0C208000	0C208000
<b>Tx Packets</b>	0C008200	0C008200	0C008200
<b>Tx Multicast Pkts</b>	0C000000	0C000000	0C000000
<b>Tx Broadcast Pkts</b>	0C008200	0C008200	0C008200

To modify an entry in this table, click on the index to select the entry, type in new value, and then click on **Modify**. To delete an entry, click on the index to select the entry and then click on **Delete**.

The following parameters are monitored in this table:

**RMON ETH Statistics variables**

<b>Variable</b>	<b>Description</b>
<b>Rx DropEvents</b>	Monitoring rx dropped packets
<b>Rx Bytes</b>	Monitoring rx bytes packets
<b>Rx Packet</b>	Monitoring rx packets
<b>Rx BroadcastPkts</b>	Monitoring rx broadcast packets
<b>Rx MulticastPkts</b>	Monitoring rx multicast packets
<b>Rx CRC Align Errors</b>	Monitoring rx error alignment packets
<b>Rx Undersize Pkts</b>	Monitoring rx undersize packets
<b>Rx Oversize Pkts</b>	Monitoring rx oversize packets
<b>Rx Fragments</b>	Monitoring rx fragments packets
<b>Rx Jabbers</b>	Monitoring rx jabber packets
<b>Tx Collisions</b>	Monitoring tx single collision packets
<b>Tx/Rx Pkts 64bytes</b>	Monitoring tx/rx 64 bytes
<b>Tx/Rx Pkts 65~127bytes</b>	Monitoring tx/rx 65 to 127 bytes
<b>Tx/Rx Pkts 128~255bytes</b>	Monitoring tx/rx 128 to 255 bytes
<b>Tx/Rx Pkts 256~511bytes</b>	Monitoring tx/rx 256 to 511 bytes
<b>Tx/Rx Pkts 512~1023bytes</b>	Monitoring tx/rx 512 to 1023 bytes
<b>Tx/Rx Pkts 1024~1518bytes</b>	Monitoring tx/rx 1024 to 1518 bytes
<b>Tx Bytes</b>	Monitoring tx bytes packets
<b>Tx Packet</b>	Monitoring tx packets
<b>Tx MulticastPkts</b>	Monitoring tx multicast packets
<b>Tx BroadcastPkts</b>	Monitoring tx broadcast packets

◆ **History Control**

This table is for controlling the ETH History table (see next section). History Control 1 is for controlling ETH History table 1; History Control 2 is for controlling ETH History table 2; etc. Type in the Requested value and Interval (sec) and then click on **New** to create a History Control entry. Up to 10 History Control entries can be created. To modify an entry, click on the index to select the entry, type in new value, and then click on **Modify**. To delete an entry, click on the index to select the entry and then click on **Delete**.

Remote Monitoring - History Control

Select Type	History Control
Next No:	2
Data Source:	GBE1
Owner:	RMON2
Requested(1~65535):	50
Interval(1~3600):	1800
	<b>NEW</b>
Modify	Delete
Query	
<b>Index (Delete/Modify)</b>	1 <input type="checkbox"/>
<b>Data Source</b>	GBE1
<b>Owner</b>	RMON1
<b>Requested</b>	50
<b>Granted</b>	50
<b>Interval</b>	1800

**RMON History Control Table**

Label	Description
<b>Data Source</b>	Data source identifies the source of the data for which historical data was collected and placed in a table on behalf of this HistoryControl entry. Here the source is GBE1 interface.
<b>Owner</b>	An owner is the entity that configured this entry and is therefore using the resources assigned to it.
<b>Requested</b>	Requested value is the requested number of intervals over which data is to be saved in the part of the media-specific table associated with this HistoryControl entry.
<b>Granted</b>	The number of sampling intervals over which data shall be saved in the part of the media-specific table associated with thisHistoryControl entry.
<b>Interval</b>	The interval in seconds over which the data is sampled for each bucket in the part of the media-specific table associated with this HistoryControl entry. The value range is 1 to 3600 (sec).

◆ **ETH History**

This option is for displaying Ethernet interface RMON history data. Before a history table is available, you have to create a History Control entry in advance (see previous section). To query the History table, click on the *History Index* drop-down list and select a history table and then click on **Query**.

Remote Monitoring - ETH History

Select Type: <span style="border: 1px solid black; padding: 2px;">ETH History</span> ▼	
History Index: <span style="border: 1px solid black; padding: 2px;">History1</span> ▼	<input type="button" value="Query"/>
<b>HistIndex</b>	1
<b>SampleIndex</b>	8354
<b>IntervalStart</b>	13818days 06:27:31
<b>Rx DropEvents</b>	00000000
<b>Rx Bytes</b>	00000318
<b>Rx Packets</b>	0000000c
<b>Rx Broadcast Pkts</b>	0000000c
<b>Rx Multicast Pkts</b>	00000000
<b>Rx CRC Align Errors</b>	00000000
<b>Rx Undersize Pkts</b>	00000000
<b>Rx Oversize Pkts</b>	00000000
<b>Rx Fragments</b>	00000000
<b>Rx Jabbers</b>	00000000
<b>Tx Collisions</b>	00000000
<b>Tx Bytes</b>	000008c0
<b>Tx Packets</b>	00000023
<b>Tx Multicast Pkts</b>	00000023
<b>Tx Broadcast Pkts</b>	00000000
<b>Utilization</b>	0000001f

**RMON ETH History Table**

Label	Description
<b>HistIndex</b>	This field shows the History Table index. The history identified by this index is the same history as identified by the same value of History Control index.
<b>SampleIndex</b>	The Sample index uniquely identifies the particular Sample among all samples associated with the same History Control entry.
<b>IntervalStart</b>	The value of System Up Time* at the start of the interval over which this sample was measured.

**\*System Up Time is the time since the network management portion of the system was last re-initialized.**

### RMON ETH History variables

Variable	Description
Rx DropEvents	Monitoring Rx dropped packets
Rx Bytes	Monitoring Rx bytes packets
Rx Packets	Monitoring Rx packets
Rx Broadcast Pkts	Monitoring Rx broadcast packets
Rx Multicast Pkts	Monitoring Rx multicast packets
Rx CRC Align Errors	Monitoring Rx error alignment packets
Rx Undersize Pkts	Monitoring Rx undersize packets
Rx Oversize Pkts	Monitoring Rx oversize packets
Rx Fragments	Monitoring Rx fragments packets
Rx Jabbers	Monitoring Rx jabber packets
Tx Collisions	Monitoring Tx single collision packets
Tx Bytes	Monitoring Tx bytes
Tx Packets	Monitoring Tx packets
Tx Multicast	Monitoring Tx multicast
Tx Broadcast	Monitoring Tx broadcast
Utilization	Monitoring Tx Utilization

◆ **Alarm**

This option allows you to configure the RMON alarm setting. This table controls the conditions on which alarms occur. Click on **New** to create an entry. To modify an entry, click on the index to select the entry, type in new value, and then click on **Modify**. To delete an entry, click on the index to select the entry and then click on **Delete**.

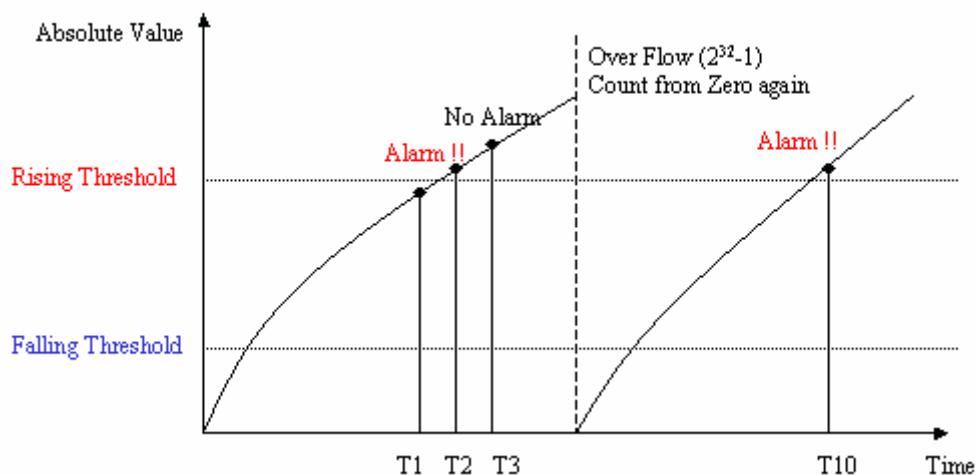
Remote Monitoring - Alarm

**RMON Alarm setup**

Label	Description
<b>Interval</b>	The interval in seconds over which the data is sampled and compared with the rising and falling thresholds. Value range: 0~2147483647 (0: disable).
<b>Owner</b>	RMON alarm owner (max 31 characters).
<b>OID Variable</b>	Click on the drop-down list to select ETH statistics variable and index of ETH Statistics table entries.
<b>SampleType</b>	RMON alarm sample type includes: ABSOLUTE: the value of the selected variable will be compared directly with the thresholds at the end of the sampling interval. DELTA: the value of the selected variable at the last sample will be subtracted from the current value, and the difference compared with the thresholds.

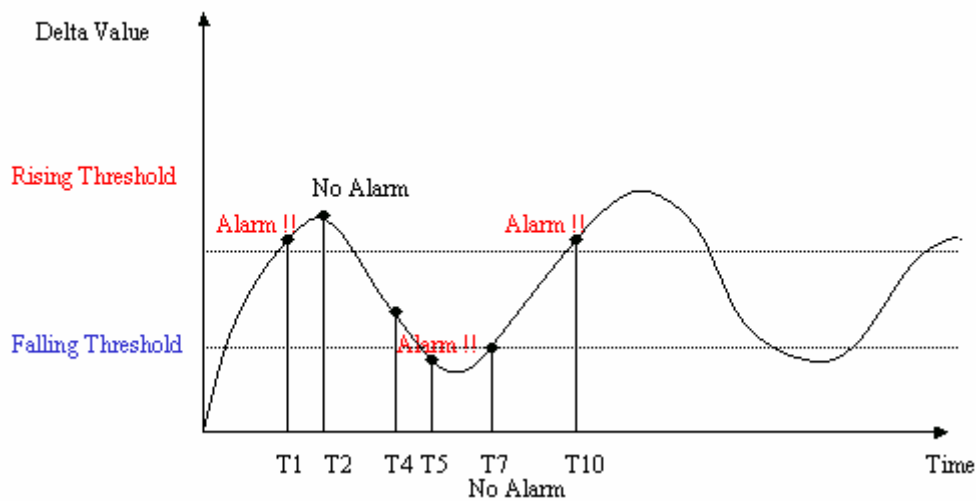
<b>StartupAlarm</b>	<p>Set the alarm type that may be sent. Options are Rising, Falling, and Both.</p> <p>Rising or Both: If the first sample after this entry becomes valid is greater than or equal to the Rising Threshold, then a single rising alarm will be generated.</p> <p>Falling or Both: If the first sample after this entry becomes valid is less than or equal to the Falling Threshold, then a single falling alarm will be generated.</p>
<b>Value</b>	This field shows the value of the monitored data.
<b>Rising Threshold</b>	RMON alarm rising threshold (0~4294967295).
<b>Falling Threshold</b>	RMON alarm falling threshold (0~4294967295).
<b>Rising Event Index</b>	This index is used when a rising threshold is crossed. You must refer to the index of RMON Event table. If there is no corresponding entry in the Event table, then no association exists.
<b>Falling Event Index</b>	This index is used when a falling threshold is crossed. You must refer to the index of RMON Event table. If there is no corresponding entry in the Event table, then no association exists.

Following figure shows an example of RMON alarm for ABSOLUTE sample type. As shown in the figure, the counting value keeps increasing. But when the value overflows, the system will count from zero again. The sample in T2 is the first one crossing the Rising Threshold, so an alarm occurs. No alarms will be generated afterwards unless the counting value overflows and count from zero again (the sample in T10 causes an alarm again).





Another figure shows the example of RMON alarm for DELTA sample type. As shown in the following figure, the delta value varies high and low. The sample in T1 is the first one crossing the Rising Threshold, so an alarm occurs. No alarms will be generated afterwards until T5 sample which is crossing the Falling Threshold (note that the value of the previous sample, T4 sample, is greater than the Falling Threshold and the value of T5 sample). Alarm is not generated for T7 sample since an alarm is already generated for T5 sample and the curve is not in a downward trend around T7. A Rising Threshold crossing alarm is generated again for T10 sample, because a Falling Threshold crossing alarm (T5) has occurred after the previous Rising Threshold crossing alarm (T1).



◆ **Event**

This option allows you to configure the RMON event setting. Click on **New** to create an entry.

To modify an entry, click on the index to select the entry, type in new value, and then click on **Modify**. To delete an entry, click on the index to select the entry and then click on **Delete**.

Remote Monitoring - Event

Select Type: Event		
Next No: 4	Description: Description4	Community: Community4
Owner: RMON4	Event Type: NONE	<input type="button" value="NEW"/>
<input type="button" value="Modify"/>	<input type="button" value="Delete"/>	<input type="button" value="Query"/>
<b>Index (Delete/Modify)</b>	1 <input type="checkbox"/>	2 <input type="checkbox"/> 3 <input type="checkbox"/>
<b>Description</b>	Description1	Description2 Description3
<b>event Type</b>	LOG	SNMPTRAP LOGANDTRAP
<b>Community</b>	Community1	Community2 Community3
<b>LastTimeSent</b>	0	0 0
<b>Owner</b>	RMON1	RMON1 RMON2

**RMON Event setup**

Label	Description
<b>Description</b>	Type in comment describing the event.
<b>Community</b>	If an SNMP trap is to be sent, it will be sent to the SNMP community specified in this column.
<b>Owner</b>	Type in the RMON event owner.
<b>Event Type</b>	Click on the drop-down list and select event type. Options are NONE, LOG (an entry is made in the log table for each event), SNMPTRAP (an SNMP trap is sent to one or more management stations), LOGANDTRAP (log and send trap).
<b>LastTimeSent</b>	The value of System Up Time at the time this event entry last generated an event.

## ◆ LOG

This option allows you to query the RMON LOG. Click on **Query** button to display the log. Only the event indices with LOG or LOGANDTRAP event type (see previous section) are possible to appear in the log.

Remote Monitoring - LOG

Select Type	LOG		
<input type="button" value="Query"/>			
Index	EventIndex	Time	Description

#### 4.6.7.5 ADSL Day/Interval

This option allows you to query the ADSL PM 15-Min and Day Statistics. The IDL-2402 provides Today and Previous 1 day for Day PM, and also provides Current and Previous 1 ~ 96 interval for 15-Min PM. From the *Maintenance* menu, click on *Performance Monitoring* and then *ADSL Day/Interval*. The following page is displayed. You can select to display one interval or all intervals data of a single port; you can also select to display one interval data for twelve ports (1~12, 13~24) at the same time.

#### ADSL Performance Statistics

More Port: 01~12	Port: 1	ALL Interval: <input type="checkbox"/>
<input type="radio"/> Day Today	<input checked="" type="radio"/> 15-Min Current	0
<input type="button" value="Query"/>		
Clearing current interval PM: <input type="button" value="Clear PM Port1"/>		
PM Counter	Near End	Far End
LOS	0	0
LOF	0	0
LOM	0	0
LPR	N/A	0
LOL	0	N/A
ES	0	0
SES	0	0
UAS	766	766
Re-Initialize(s)	0	N/A
Initialize fail(s)	0	N/A
User Cell(CU)	0	N/A
Delineate Cell(CD)	0	N/A
HEC	0	0
IBE	0	0
Channel-CV's	0	0
Channel-FECCs	0	0
<a href="#">[ TCA PROFILE ]</a>		
15-Min Previous PM number between 1 and 96		

#### ADSL PM Statistics

Label	Description
More Port	Click on the drop-down list and select the port range. Options are: 01~12, 13~24. This drop-down list is available only when <b>All</b> is selected in the <i>Port</i> drop-down list.

<b>Port</b>	Click on the drop-down list and select a line port number (1 ~ 24). You can also select <b>All</b> and then click on <i>More Port</i> to select a port range to view the data of twelve ports at the same time.
<b>All Interval</b>	When you select to view a single port PM data, you can click on this checkbox to display the data of all intervals.
<b>Query</b>	Click on this button to get most recent data.
<b>Clear PM</b>	Click on this button to clear current PM data of the port you select.
<b>LOS</b>	Loss of Signal
<b>LOF</b>	Loss of Frame
<b>LOM</b>	Loss of Margin
<b>LPR</b>	Loss of Power (only for Far End)
<b>LOL</b>	Loss of Link (only for Near End)
<b>ES</b>	Errored Seconds
<b>SES</b>	Severely Errored Seconds
<b>UAS</b>	Unavailable Seconds
<b>Re-Initialize</b>	Modem Re-initialization events (only for Near End)
<b>Initialize fail(s)</b>	Modem Failed Initialization events (only for Near End)
<b>User Cell (CU)</b>	User Total Cell Count (only for Near End)
<b>Delineate Cell (CD)</b>	Delineated Total Cell Count (only for Near End)
<b>HEC</b>	ATM Header Error Count
<b>IBE</b>	Idle Cell Bit Error Count
<b>Channel-CVs</b>	Channel PM - Code Violations
<b>Channel-FECCs</b>	Channel PM- Forward Error Corrections

## 5. CLI Command Reference

### Introduction

Access to the Operations System (OS) /Network Element (NE) system is protected by a logon security system. You can log on to the NE with the user name and password. After three failed logon attempts, the system refuses further attempts.

After you log on, the system monitors the interface for periods of inactivity. If the interface is inactive for too long, you are automatically logged off.

All the NEs have the same initial user name (admin) and password (admin). You should change the password as soon as possible, because the initial password is known to anyone who reads this manual. You can also change the user name or add additional user names. Use the "account add" command to enter a new user identification, password and authorization level. The system can handle one local logon session and at least four remote/OS sessions.

### Connect Interface

Interface	Parameter
Console	Baud rate: 9600, Data bit:8, Parity: None, Stop bit :1
Telnet	Port 23
SSH	Port 22 (In Windows, you can run terminal emulator such as PuTTY)

### Authorization Level

Level	Description
Super user	Superuser can run all commands.
Engineer	Engineer can run all commands except the commands for creating/modifying/ deleting account and displaying running configuration.
Guest (default)	Guest can run most commands except the commands that have creating/ modifying/deleting purpose.

## Screen Description

```
this is motd file to inform any information to user
System Description: IDL-2402 24-port ADSL2+ POTS — System Information
Hardware Version:C
Firmware Version:1.00805 — System HW, FW,SW version
Software Version:1.00805
Compiled Tue Jun 10 20:43:55 CST 2008
local:>enable
local:%
===== Enable Mode Help =====
bye          Quit CLI
disable      Disable mode
end          Return to Enable mode
exit        Exit current mode
help        Help command
list        List command
system      System commands
cluster     Cluster management switch
-----
configure    Configuration mode
ping         ICMP Ping
show         Show commands
telnet       Telnet to ip address
traceroute   Trace Route
local:% — Prompt Symbol
```

Global Command and Description

General Command and Description

Screen Description

## Execution Modes

The CLI contains several execution modes. Users will see different set of commands under different execution modes. Table 5-1 lists all the execution modes and their purposes. When users enter a certain execution mode, the corresponding mode prompt will be displayed automatically on the screen. The mode prompts of all the execution modes are also listed in Table 5-1.

**5-1 List of Execution Modes**

Execute mode	Description	Prompt symbol
Initialize	Without login prompt or already authenticated	>
Enable	Management capable	%
Configure	Configuration capable	(conf)#
Interface	Interface configure capable	(intf-conf)#
Ethernet Interface	Ethernet Interface configure capable	(ethernet-intf-conf)#
ATM Bridge	ATM Bridge configuration capable	(bridge-atm-conf)#
ATM Description	ATM Description configuration capable	(atm-desc-conf)#
ADSL config	ADSL line configuration capable	(adsl-intf-conf)#
IPOA config	IPoA routed mode configuration capable	(ipoa-intf-conf)#
Bridge	Bridge configuration capable	(bridge-eth-conf)#
Access List	ACL configuration capable	(acl-conf)#
Service Profile	User/Line service profile configuration capable	(service-profile)#
Spectrum Profile	User/Line spectrum profile configuration capable	(spectrum-profile)#
Alarm Profile	User/Line alarm profile configuration capable	(alarm-profile)#
Tca Profile	User/Line tca profile configuration capable	(tca-profile)#
IGMP ACL Profile	IGMP ACL profile configuration capable	(igmpacl-profile)#
Rate Limit Profile	Rate-Limit Policer profile configuration capable	(rate-limit-profile)#
Priority List	Priority List configuration capable	(prio-conf)#



## Getting help

The user can get help in two ways.

The first is by using the **help** command. The user can also enter a question mark '?' at each position in the command. The displayed result depends on the execution mode and previous input.

## Terminal Key Function

Following is the list of all the terminal keys and their function.

**Table 5-1 List of Terminal Keys**

<b>TAB</b>	Attempt to perform completion on the text before point
<b>TAB TAB</b>	Display the next keyword of this command
<b>?</b>	Display help of command
<b>ENTER</b>	Execute input
<b>DEL or BACKSPACE</b>	Delete the character to the left of the cursor
<b>UP Arrow</b>	History of last input line
<b>DOWN Arrow</b>	History of previous input Line
<b>CTRL-d</b>	Delete the character at point. If point is at the beginning of the line, there are no characters in the line, and the last character typed was not bound to delete-char, then return EOF.
<b>CTRL-a</b>	Move to the start of the line
<b>CTRL-e</b>	Move to the end of the line
<b>CTRL-f</b>	Move Forward one character
<b>CTRL-b</b>	Move Back one character
<b>CTRL-c</b>	Force to interrupt
<b>CTRL-k</b>	Kill the text from the current cursor to the end
<b>CTRL-p</b>	Move 'back' through the history list, fetching the previous command.
<b>CTRL-n</b>	Move 'forward' through the history list, fetching the next command.
<b>CTRL-r</b>	Search backward starting at the current line and moving 'up' through the history as necessary. This is an incremental search.

<b>CTRL-t</b>	Drag the character before the cursor forward over the character at the cursor, moving the cursor forward as well. If the insertion point is at the end of the line, this transposes the last two characters of the line. Negative arguments have no effect.
<b>CTRL-u</b>	Kill backward from the cursor to the beginning of the current line.
<b>CTRL-w</b>	Kill the word behind point, using white space as a word boundary. The killed text is saved on the kill-ring.
<b>CTRL-y</b>	Yank the top of the kill ring into the buffer at point.
<b>CTRL-s</b>	Terminal will not response to what the operator key in
<b>CTRL-q</b>	Back to normal mode from terminal not responding mode
<b>CTRL-z</b>	Exit current execution mode

## Notation Conventions

The notation conventions for the parameter syntax of each CLI command are as follows:

- ◆ Parameters enclosed in [ ] are optional.
- ◆ Parameter values are separated by a vertical bar “|” only when one of the specified values can be used.
- ◆ Parameter values are enclosed in { } when you must use one of the values specified.

## About String-type Parameters

Some commands have string type parameters. When you type in the values of these parameters, you must be careful not to use the keyword that is actually a part of some command. For example, ‘account add default’ will cause a syntax mistake, since **default** is the keyword of the command ‘igmp default’ and some other commands. Therefore, it is recommended to add “ ” when you have to use the command keyword as the parameter value. In this way, the keyword will be regarded as a common string. For example, account add “default”.

## 5.1 Global Commands

---

The Global commands can be used in all execution modes.

### 5.1.1 bye

<b>Description</b>	Exit
<b>Syntax</b>	bye
<b>Parameter</b>	None

### 5.1.2 cluster

<b>Description</b>	Switch to a NE (network element) in the cluster
<b>Syntax</b>	cluster <string>
<b>Parameter</b>	

Name	Description
<string>	NE name in the cluster you want to switch to. <b>Valid values:</b> string type value. <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.1.3 cluster local

<b>Description</b>	Switch to Master in the cluster
<b>Syntax</b>	cluster local
<b>Parameter</b>	None

### 5.1.4 disable

<b>Description</b>	Go to Disable execution mode from logoff mode
<b>Syntax</b>	disable
<b>Parameter</b>	None

### 5.1.5 end

<b>Description</b>	Return to Enable mode
<b>Syntax</b>	end
<b>Parameter</b>	None

### 5.1.6 exit

<b>Description</b>	Go to previous execution mode
<b>Syntax</b>	exit
<b>Parameter</b>	None

### 5.1.7 help

**Description** Display help  
**Syntax** help  
**Parameter** None

### 5.1.8 list

**Description** Display all commands of current mode  
**Syntax** list  
**Parameter** None

### 5.1.9 list opmode

**Description** List all the ADSL modes of operation.  
**Syntax** list opmode  
**Parameter** None

### 5.1.10 system contact

**Description** Set system contact  
**Syntax** system contact <contact>  
**Parameter**

Name	Description
<contact>	System contact <b>Valid values:</b> string type value. Max 63 characters. <b>Default value:</b> - <b>Type:</b> Optional

### 5.1.11 system location

**Description** Set system location  
**Syntax** system location <location>  
**Parameter**

Name	Description
<location>	System location <b>Valid values:</b> string type value. Max 63 characters. <b>Default value:</b> - <b>Type:</b> Optional

### 5.1.12 system name

**Description** Set system name

**Syntax** system name <name>

**Parameter**

Name	Description
<name>	System name <b>Valid values:</b> string type value. Max 32 characters. <b>Default value:</b> - <b>Type:</b> Optional

### 5.1.13 system restart

**Description** Restart the system

**Syntax** system restart

**Parameter** None

## 5.2 Initialize Mode Commands

---

### 5.2.1 enable

<b>Description</b>	Go to Enable execution mode from disable mode
<b>Syntax</b>	enable
<b>Parameter</b>	None

### 5.2.2 show license

<b>Description</b>	Display GNU software license
<b>Syntax</b>	show license
<b>Parameter</b>	None

### 5.2.3 show time

<b>Description</b>	Display current time
<b>Syntax</b>	show time
<b>Parameter</b>	None

### 5.2.4 show uptime

<b>Description</b>	Display System up time and CPU loading
<b>Syntax</b>	show uptime
<b>Parameter</b>	None

### 5.2.5 show version

<b>Description</b>	Display CLI software version
<b>Syntax</b>	show version
<b>Parameter</b>	None

## 5.3 Enable Mode Commands

---

The commands in this section can be executed only in the Enable execution mode.

### 5.3.1 configure

<b>Description</b>	Go to Configure execution mode from Enable mode.
<b>Syntax</b>	configure
<b>Parameter</b>	None

### 5.3.2 ping

<b>Description</b>	ICMP echo and reply from hostname address or IP address. If no reply for a long time, you can press Ctrl + c to interrupt ping.
<b>Syntax</b>	ping {ipv4 address} ping {ipv4 address} count <count> ping {ipv4 address} size <size> ping {ipv4 address} count <count> size <size>

#### Parameter

Name	Description
ipv4 address	IPv4 address. <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> -
count	The number of PING packets sent. <b>Default value:</b> -
size	Packet size. <b>Default value:</b> -

### 5.3.3 show access-list bcrate

<b>Description</b>	Display all broadcast rate limiting list
<b>Syntax</b>	show access-list bcrate
<b>Parameter</b>	None

### 5.3.4 show access-list dstip

<b>Description</b>	Display all dest IP deny access list or by index
<b>Syntax</b>	show access-list dstip [<index>]
<b>Parameter</b>	

Name	Description
<index>	Destination IP deny access list number. <b>Valid values:</b> 1 ~ 256



	<b>Default value:</b> - <b>Type:</b> Optional
--	--

### 5.3.5 show access-list dstmac

**Description** Display all destination MAC address deny access list or by index

**Syntax** show access-list dstmac [<index>]

**Parameter**

Name	Description
<index>	Destination MAC deny access list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.6 show access-list ethertype

**Description** Display all EtherType deny access list or by index

**Syntax** show access-list ethertype [<index>]

**Parameter**

Name	Description
<index>	EtherType deny access list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.7 show access-list ip-allowed

**Description** Display all static IP allowed access list or by index

**Syntax** show access-list ip-allowed [<index>]

**Parameter**

Name	Description
<index>	Static IP allowed access list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.8 show access-list ipprotocol

**Description** Display all IP protocol deny access list or by index

**Syntax** show access-list ipprotocol [<index>]

**Parameter**

Name	Description
<index>	IP Protocol deny access list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.9 show access-list l4dstport

**Description** Display all L4 dest port deny access list or by index

**Syntax** show access-list l4dstport [<index>]

**Parameter**

Name	Description
<index>	L4 destination port deny access list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.10 show access-list mcflrate

**Description** Display all flooding rate limiting list or by VLAN ID

**Syntax** show access-list mcflrate [vlan <VLAN ID>]

**Parameter**

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.11 show access-list srcip

**Description** Display all source IP deny access list or by index

**Syntax** show access-list srcip [<index>]

**Parameter**

Name	Description
<index>	Source IP deny access list number. <b>Valid values:</b> 1 ~ 256

	<b>Default value:</b> - <b>Type:</b> Optional
--	--

### 5.3.12 show access-list srcmac

**Description** Display all source mac address deny access list or by index

**Syntax** show access-list srcmac [<index>]

**Parameter**

Name	Description
<index>	Source MAC deny access list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.13 show account

**Description** Display system account list / detail information

**Syntax** show account [detail]

**Parameter** None

### 5.3.14 show aging

**Description** Display bridge aging time

**Syntax** show aging

**Parameter** None

### 5.3.15 show alarm current

**Description** Display current alarm list

**Syntax** show alarm current

**Parameter** None

### 5.3.16 show alarm event

**Description** Display event list

**Syntax** show alarm event

**Parameter** None

### 5.3.17 show alarm history

**Description** Display alarm history list

**Syntax** show alarm history

**Parameter** None

### 5.3.18 show atmdesc

**Description** Display ATM descriptor  
**Syntax** show atmdesc  
**Parameter** None

### 5.3.19 show atm-loopback

**Description** Display ATM loopback status (by port)  
**Syntax** show atm-loopback [<port>]  
**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.20 show cli-config

**Description** Display current setting for CLI configuration (timeout value, session value)  
**Syntax** show cli-config  
**Parameter** None

### 5.3.21 show cluster

**Description** Display cluster configuration / Display cluster member list / Display cluster status  
**Syntax** show cluster {config | member | status}  
**Parameter** None

### 5.3.22 show cpu

**Description** Display CPU information  
**Syntax** show cpu  
**Parameter** None

### 5.3.23 show dot1x

**Description** Display 802.1x information  
**Syntax** show dot1x  
**Parameter** None

### 5.3.24 show dot1x profile

**Description** Display 802.1x profile  
**Syntax** show dot1x profile  
**Parameter** None

### 5.3.25 show dot1x server

**Description** Display 802.1x server configuration  
**Syntax** show dot1x server  
**Parameter** None

### 5.3.26 show dot1x server <index>

**Description** Display 802.1x server configuration by index [1..3]  
**Syntax** show dot1x server <index>  
**Parameter**

Name	Description
<index>	Display 802.1x server configuration by index. <b>Valid values:</b> 1 ~ 3 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.27 show dsl-line-identify

**Description** Display DSL line identify information  
**Syntax** show dsl-line-identify  
**Parameter** None

### 5.3.28 show fdb

**Description** Display all MAC learning table or by VLAN ID  
**Syntax** show fdb [vlan <VLAN ID>]  
**Parameter**

Name	Description
<VLAN ID>	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.29 show fdbstatic

**Description** Display all static MAC forwarding table or by index

**Syntax** show fdbstatic [<index>]

**Parameter**

Name	Description
<index>	Static MAC forwarding table number. <b>Valid values:</b> 1 ~ 512 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.30 show firmware

**Description** Display firmware update status or partition information.

**Note:** the 'Active' status of the firmware partition information means the active partition for next time restart, not current running partition.

Ex.

```
local:%show firmware partition
```

```
Current Version:1.00B05
```

Partition	Version	Date	Status
-----			
1	1.00B05t1	2008/7/4	--
2	1.00B05	2008/6/18	Active

**Syntax** show firmware {status | partition}

**Parameter** None

### 5.3.31 show help

**Description** Display Help

**Syntax** show help

**Parameter** None

### 5.3.32 show http

**Description** Display HTTP Web port

**Syntax** show http

**Parameter** None

### 5.3.33 show igmp

**Description** Display IGMP information

**Syntax** show igmp

**Parameter** None

### 5.3.34 show igmp group

**Description** Display IGMP VLAN group list

**Syntax** show igmp group list

show igmp group ip <ipv4 address> vlan <VLAN ID>

show igmp group ip <ipv4 address> vlan <VLAN ID> src list

show igmp group ip <ipv4 address> vlan <VLAN ID> src <ipv4 address>

**Parameter**

Name	Description
ipv4 address	IGMP group address <b>Valid values:</b> 224.0.0.0 ~ 239.255.255.255 The range of addresses from 224.0.0.0 to 224.0.0.255 is reserved for the use of routing protocols and other low-level topology discovery or maintenance protocols. <b>Default value:</b> - <b>Type:</b> Mandatory
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.35 show igmp rtpport

**Description** Display all IGMP router port list or by VLAN ID

**Syntax** show igmp rtpport [vlan <VLAN ID>]

**Parameter**

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.36 show igmp-acl bind gigabit

**Description** Display IGMP ACL bind status for gigabit interface

**Syntax** show igmp-acl bind gigabit <port>

**Parameter**

Name	Description
port	Gigabit Ethernet port number <b>Valid values:</b> 1 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.37 show igmp-acl bind xdsl

**Description** Display IGMP ACL bind status for xdsl bridge port

**Syntax** show igmp-acl bind xdsl <port>

**Parameter**

Name	Description
port	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.38 show interface xdsl {all | <port>} adsl carrier fe ds snr

**Description** Display carrier information of far-end snr downstream by Bridge port (the xdsl port must be in diagnostic mode and the test is completed)

**Syntax** show interface xdsl {all | <port>} adsl carrier fe ds snr

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory



### 5.3.39 show interface xdsl {all | <port>} adsl carrier fe ds qln

**Description** Display carrier information of far-end qln downstream by Bridge port (the xdsl port must be in diagnostic mode and the test is completed)

**Syntax** show interface xdsl {all | <port>} adsl carrier fe ds qln

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.40 show interface xdsl {all | <port>} adsl carrier fe ds hlin

**Description** Display carrier information of far-end hlin downstream by Bridge port (the xdsl port must be in diagnostic mode and the test is completed)

**Syntax** show interface xdsl {all | <port>} adsl carrier fe ds hlin

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.41 show interface xdsl {all | <port>} adsl carrier fe ds hlog

**Description** Display carrier information of far-end hlog downstream by Bridge port (the xdsl port must be in diagnostic mode and the test is completed)

**Syntax** show interface xdsl {all | <port>} adsl carrier fe ds hlog

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.42 show interface xdsl {all | <port>} adsl carrier fe us load

**Description** Display carrier information of far-end load upstream by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl carrier fe us load

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.43 show interface xdsl {all | <port>} adsl carrier fe us gain

**Description** Display carrier information of far-end gain upstream by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl carrier fe us gain

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.44 show interface xdsl {all | <port>} adsl carrier fe us tss

**Description** Display carrier information of far-end tss upstream by Bridge port (the xdsl port must be in diagnostic mode and the test is completed)

**Syntax** show interface xdsl {all | port>} adsl carrier fe us tss

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.45 show interface xdsl {all | <port>} adsl carrier ne us snr

**Description** Display carrier information of near-end snr upstream by Bridge port (the xdsl port must be in diagnostic mode and the test is completed)

**Syntax** show interface xdsl {all | <port>} adsl carrier ne us snr

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.46 show interface xdsl {all | <port>} adsl carrier ne us qln

**Description** Display carrier information of near-end qln upstream by Bridge port (the xdsl port must be in diagnostic mode and the test is completed)

**Syntax** show interface xdsl {all | <port>} adsl carrier ne us qln

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.47 show interface xdsl {all | <port>} adsl carrier ne us hlin

**Description** Display carrier information of near-end hlin upstream by Bridge port (the xdsl port must be in diagnostic mode and the test is completed)

**Syntax** show interface xdsl {all | <port>} adsl carrier ne us hlin

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.48 show interface xdsl {all | <port>} adsl carrier ne us hlog

**Description** Display carrier information of near-end hlog upstream by Bridge port (the xdsl port must be in diagnostic mode and the test is completed)

**Syntax** show interface xdsl {all | <port>} adsl carrier ne us hlog

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.49 show interface xdsl {all | <port>} adsl carrier ne ds load

**Description** Display carrier information of near-end load downstream by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl carrier ne ds load

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.50 show interface xdsl {all | <port>} adsl carrier ne ds gain

**Description** Display carrier information of near-end gain downstream by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl carrier ne ds gain

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.51 show interface xdsl {all | <port>} adsl carrier ne ds tss

**Description** Display carrier information of near-end tss downstream by Bridge port (the xdsl port must be in diagnostic mode and the test is completed)

**Syntax** show interface xdsl {all | <port>} adsl carrier ne ds tss

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.52 show interface xdsl {all | <port>} adsl channel

**Description** Display xDSL line channel information by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl channel

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.53 show interface xdsl {all | <port>} adsl failure

**Description** Display xDSL failure by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl failure

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.54 show interface xdsl {all | <port>} adsl line

**Description** Display xDSL line status by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl line

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.55 show interface xdsl {all | <port>} adsl line config

**Description** Display xDSL line configuration information by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl line config

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.56 show interface xdsl {all | <port>} adsl line delt-test

**Description** Display xDSL line DELT test information by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl line delt-test

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.57 show interface xdsl {all | <port>} adsl line information

**Description** Display xDSL line information by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl line information

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.58 show interface xdsl {all | <port>} adsl inventory

**Description** Display xDSL inventory by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl inventory

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.59 show interface xdsl {all | <port>} adsl operational

**Description** Display xDSL far-end/near-end operational information by Bridge port

**Syntax** show interface xdsl {all | <port>} adsl operational {fe | ne}

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.60 show interface xdsl {all | <port>} bridge

**Description** Display Bridge information by Bridge port

**Syntax** show interface xdsl {all | <port>} bridge

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.61 show interface xdsl {all | <port>} cellcount

**Description** Display ATM cell counter by Bridge port

**Syntax** show interface xdsl {all | <port>} cellcount

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.62 show interface xdsl {all | <port>} counter

**Description** Display Ethernet packet counter by Bridge port

**Syntax** show interface xdsl {all | <port>} counter

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory



### 5.3.63 show interface xdsl {all | <port>} ipoa

**Description** Display IPoA (RFC 2684) information by Bridge port

**Syntax** show interface xdsl {all | <port>} ipoa

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.64 show interface xdsl {all | <port>} vc

**Description** Display VC information by Bridge port

**Syntax** show interface xdsl {all | <port>} vc

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.65 show interface xdsl {all | <port>} vlan

**Description** Display VLAN information by Bridge port

**Syntax** show interface xdsl {all | <port>} vlan

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.66 show interface bridge

**Description** Display All interface Bridge information

**Syntax** show interface bridge

**Parameter** None

### 5.3.67 show interface counter

**Description** Display All interface Ethernet packet counter

**Syntax** show interface counter

**Parameter** None

### 5.3.68 show interface gigabit [<port>] bridge

**Description** Display Bridge information of the Gigabit Ethernet interface or by Gigabit Ethernet port

**Syntax** show interface gigabit [<port>] bridge

**Parameter**

Name	Description
port	Gigabit Ethernet port number <b>Valid values:</b> 1 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.69 show interface gigabit [<port>] counter

**Description** Display Gigabit Ethernet counter of the Gigabit Ethernet interface or by Gigabit Ethernet port

**Syntax** show interface gigabit [<port>] counter

**Parameter**

Name	Description
port	Gigabit Ethernet port number <b>Valid values:</b> 1 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.70 show interface gigabit [<port>] vlan

**Description** Display VLAN information of the Gigabit Ethernet interface or by Gigabit Ethernet port

**Syntax** show interface gigabit [<port>] vlan

**Parameter**

Name	Description
port	Gigabit Ethernet port number <b>Valid values:</b> 1 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.71 show mac-spoofing-detect config

**Description** Display MAC Spoofing Detect configuration  
**Syntax** show mac-spoofing-detect config  
**Parameter** None

### 5.3.72 show mac-spoofing-detect log

**Description** Display MAC Spoofing Detect log  
**Syntax** show mac-spoofing-detect log  
**Parameter** None

### 5.3.73 show management all

**Description** Display all system management port ip setting  
**Syntax** show management all  
**Parameter** None

### 5.3.74 show management gbe

**Description** Display GBE management port ip setting  
**Syntax** show management gbe  
**Parameter** None

### 5.3.75 show pm <port> adsl day

**Description** Display performance monitoring data for previous 1 day or current day

**Syntax** show pm <port> adsl day {<number> | current}

**Parameter**

Name	Description
port	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory
number	Day number <b>Valid values:</b> 1~1 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.76 show pm <port> adsl interval

**Description** Display performance monitoring data for previous 1~96 intervals or current interval

**Syntax** show pm <port> adsl interval {<number> | current}

**Parameter**

Name	Description
port	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory
number	Interval number <b>Valid values:</b> 1~96 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.77 show port-template parameter

**Description** Display parameter mask. That is, display which profiles (or function) of the template port are selected to be duplicated to other ports. Mask means selected; Unmask means not-selected.

**Syntax** show port-template parameter

**Parameter** None

### 5.3.78 show priority-list ds

**Description** Display differentiated services priority list

**Syntax** show priority-list ds [<number>]

**Parameter**

Name	Description
number	Differentiate services priority list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.79 show priority-list dstip

**Description** Display destination IP address priority list

**Syntax** show priority-list dstip [<number>]

**Parameter**

Name	Description
number	Destination IP address priority list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.80 show priority-list dstmac

**Description** Display destination MAC address priority list

**Syntax** show priority-list dstmac [<number>]

**Parameter**

Name	Description
number	Destination MAC address priority list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.81 show priority-list ethertype

**Description** Display specific Ether Type VLAN priority list

**Syntax** show priority-list ethertype [<number>]

**Parameter**

Name	Description
number	Ether Type priority list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.82 show priority-list ipprotocol

**Description** Display IP Protocol VLAN priority list

**Syntax** show priority-list ipprotocol [<number>]

**Parameter**

Name	Description
number	IP Protocol VLAN priority list number. <b>Valid values:</b> 1 ~ 256

	<b>Default value:</b> - <b>Type:</b> Optional
--	--

### 5.3.83 show priority-list srcip

**Description** Display source IP address priority list

**Syntax** show priority-list srcip [<number>]

**Parameter**

Name	Description
number	Source IP address priority list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.84 show priority-list srcmac

**Description** Display source MAC address priority list

**Syntax** show priority-list srcmac [<number>]

**Parameter**

Name	Description
number	Source MAC address priority list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.85 show priority-list tos

**Description** Display ToS (IP Precedence) priority list

**Syntax** show priority-list tos [<number>]

**Parameter**

Name	Description
number	ToS (IP Precedence) priority list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.86 show priority-list vlanid

**Description** Display VLAN ID priority list

**Syntax** show priority-list vlanid [<number>]

**Parameter**

Name	Description
number	VLAN ID priority list number. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.87 show priority-queue config

**Description** Display Priority and Queue mapping configuration

**Syntax** show priority-queue config

**Parameter** None

### 5.3.88 show priority-regen

**Description** Display VLAN priority tag filter

**Syntax** show priority-regen

**Parameter** None

### 5.3.89 show profile alarm all

**Description** Display alarm profile

**Syntax** show profile alarm all

**Parameter** None

### 5.3.90 show profile igmp-acl

**Description** Display IGMP ACL profile

**Syntax** show profile igmp-acl <number>

**Parameter**

Name	Description
<number>	Profile index <b>Valid values:</b> 1~15 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.91 show profile rate-limit policer

**Description** Display rate limit policer information

**Syntax** show profile rate-limit policer

**Parameter** None

### 5.3.92 show profile service adsl

**Description** Display ADSL service profile

**Syntax** show profile service adsl {<number> | all}

**Parameter**

Name	Description
<number>	Profile index <b>Valid values:</b> 1~120 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.93 show profile spectrum adsl

**Description** Display ADSL service profile

**Syntax** show profile service adsl {<number> | all}

**Parameter**

Name	Description
<number>	Profile index <b>Valid values:</b> 1~120 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.94 show profile tca adsl

**Description** Display one specified threshold crossing alert profile or all profiles

**Syntax** show profile tca adsl {<index> | all}

**Parameter**

Name	Description
<index>	Profile index <b>Valid values:</b> 1~64 <b>Default value:</b> - <b>Type:</b> Mandatory



### 5.3.95 show rmon alarm

**Description** Display RMON alarm information

**Syntax** show rmon alarm {all | <number>}

**Parameter**

Name	Description
number	RMON alarm entry index. <b>Valid values:</b> 1 ~ 64 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.96 show rmon ether\_history

**Description** Display RMON Ether history information

**Syntax** show rmon ether\_history <number>

**Parameter**

Name	Description
number	RMON index. <b>Valid values:</b> 1 ~ 10 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.97 show rmon event

**Description** Display RMON event information

**Syntax** show rmon event {all | <number>}

**Parameter**

Name	Description
number	RMON event entry index. <b>Valid values:</b> 1 ~ 128 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.98 show rmon history

**Description** Display RMON history control information

**Syntax** show rmon history {all | <number>}

**Parameter**

Name	Description
number	RMON history control entry index. <b>Valid values:</b> 1 ~ 10

	<b>Default value:</b> - <b>Type:</b> Mandatory
--	---

### 5.3.99 show rmon log

**Description** Display RMON log

**Syntax** show rmon log

**Parameter** None

### 5.3.100 show rmon statistic

**Description** Display RMON statistic information

**Syntax** show rmon statistic {all | <number>}

**Parameter**

Name	Description
number	RMON statistic entry index. <b>Valid values:</b> 1 ~ 10 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.101 show route

**Description** Display GBE routing table and default gateway

**Syntax** show route

**Parameter** None

### 5.3.102 show runningcfg

**Description** Display running config

**Syntax** show runningcfg

**Parameter** None

### 5.3.103 show runningcfg interface gigabit

**Description** Display running config by Gigabit Ethernet interface

**Syntax** show runningcfg interface gigabit <port>

**Parameter**

Name	Description
port	Gigabit port number <b>Valid values:</b> 1 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.104 show runningcfg interface xdsl

**Description** Display running config by XDSL interface

**Syntax** show runningcfg interface xdsl <port>

**Parameter**

Name	Description
port	XDSL Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.105 show snmp

**Description** Display SNMP community/notify/target setting

**Syntax** show snmp {community | notify | target}

**Parameter** None

### 5.3.106 show sntp

**Description** Display SNTP setting

**Syntax** show sntp

**Parameter** None

### 5.3.107 show syslog server

**Description** Display IP address of the syslog server

**Syntax** show syslog server

**Parameter** None

### 5.3.108 show system

**Description** Display system information/inventory/name/performance

**Syntax** show system {information | inventory | name | performance}

**Parameter** None

### 5.3.109 show tcm config

**Description** Display TCM (Three-Color Marking) Policer configuration

**Syntax** show tcm config

**Parameter** None

### 5.3.110 show tcm-policer

**Description** Display TCM Policer Binding Table

**Syntax** show tcm-policer

**Parameter** None

### 5.3.111 show temperature

**Description** Display system temperature  
**Syntax** show temperature  
**Parameter** None

### 5.3.112 show time

**Description** Display current time  
**Syntax** show time  
**Parameter** None

### 5.3.113 show uptime

**Description** Display System up time and CPU loading  
**Syntax** show uptime  
**Parameter** None

### 5.3.114 show version

**Description** Display CLI software version  
**Syntax** show version  
**Parameter** None

### 5.3.115 show version detail

**Description** Display CLI software version and system information  
**Syntax** show version detail  
**Parameter** None

### 5.3.116 show vlan

**Description** Display bridge port member set  
**Syntax** show vlan [<VLAN ID>]  
**Parameter**

Name	Description
<VLAN ID>	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Optional

### 5.3.117 show vlan ethertype

**Description** Show VLAN S-Tag Ether type

**Syntax** show vlan ethertype

**Parameter** None

### 5.3.118 show vlan protocol-base

**Description** Display protocol based VLAN table

**Syntax** show vlan ethertype

**Parameter** None

### 5.3.119 show vlan-translation one-to-one

**Description** Display one-to-one VLAN translation table

**Syntax** show vlan-translation one-to-one

**Parameter** None

### 5.3.120 show vlan-translation many-to-one

**Description** Display many-to-one VLAN translation table

**Syntax** show vlan-translation many-to-one

**Parameter** None

### 5.3.121 telnet

**Description** Telnet to a destination (if you're connecting to the DSLAM through its console port, this command is not provided)

**Syntax** telnet <target address>

**Parameter**

Name	Description
target address	IPV4 address or hostname <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.3.122 traceroute

**Description** Trace route (and not use ICMP ECHO instead of UDP datagrams)

**Syntax** traceroute <target address> [no\_icmp]

**Parameter**

Name	Description
target address	IPV4 address <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.4 Configure Mode Commands

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The commands in this section can be executed only in the Configure execution mode.

### 5.4.1 access-list

**Description** Go to access-list execution mode from Configure mode.

**Syntax** access-list

**Parameter** None

### 5.4.2 account add

**Description** Add new account

**Syntax** account add <name>

account add <name> password <password> comment <comment>

account add <name> password <password> level <level>  
[comment <comment>]

account add <name> password <password> password-expiration  
<day number>

**Parameter**

Name	Description
<name>	ID name (max 31 characters). Only 0-9, a-z, A-Z, and symbol “_.” are accepted for account name. For example, abc_12_XYZ-10.1 is a valid user name. Note that the IDL-2402 does not accept user names beginning with a digital number. For example, 123abc or 123456 are not a valid name. <b>Default value:</b> - <b>Type:</b> Mandatory
<password>	Input password (max 31 characters) <b>Default value:</b> space char <b>Type:</b> Optional
<level>	Set access level <b>Valid values:</b> superuser, engineer, guest <b>Default value:</b> guest <b>Type:</b> Optional
<comment>	Set comment (max 31 characters) <b>Default value:</b> space char <b>Type:</b> Optional

<day number>	Set password expiration days (0:disable) <b>Default value:</b> - <b>Type:</b> Optional
--------------	--

### 5.4.3 account delete

**Description** Delete account  
**Syntax** account delete <name>  
**Parameter**

Name	Description
<name>	ID name (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.4.4 account modify

**Description** Modify account  
**Syntax** account modify <name> comment <comment>  
account modify <name> password <password> [{ level <level>  
[comment <comment>] | comment <comment> |  
password-expiration <day number> }]  
account modify <name> level <level> [comment <comment>]  
account modify <name> password-expiration <day number>

**Parameter**

Name	Description
<name>	ID name (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory
<password>	Input password (max 31 characters) <b>Default value:</b> space char <b>Type:</b> Optional
<level>	Set access level <b>Valid values:</b> superuser, engineer, guest <b>Default value:</b> guest <b>Type:</b> Optional
<comment>	Set comment (max 31 characters) <b>Default value:</b> space char <b>Type:</b> Optional
day number	Set password expiration days (0:disable)

	<b>Default value:</b> - <b>Type:</b> Optional
--	--

#### 5.4.5 aging

**Description** Bridge aging time

**Syntax** aging <number>

**Parameter**

Name	Description
number	Aging time (sec). <b>Valid values:</b> (10~1000000) sec. <b>Default value:</b> 300 <b>Type:</b> Mandatory

#### 5.4.6 alarm event clear

**Description** Clear alarm event log

**Syntax** alarm event clear

**Parameter** None

#### 5.4.7 alarm history clear

**Description** Clear alarm history

**Syntax** alarm history clear

**Parameter** None

#### 5.4.8 atmdesc

**Description** Go to ATM-description execution mode from Configure mode

**Syntax** atmdesc

**Parameter** None

#### 5.4.9 atm-loopback

**Description** ATM loopback testing OAM Cell Generation enable / OAM Cell Generation disable / Set ATM loopback type or clear loopback status for a PVC

**Syntax** atm-loopback enable  
atm-loopback disable  
atm-loopback <port>/<pvc> {type <type> | clear}

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48)



	<b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1~8 <b>Default value:</b> - <b>Type:</b> Mandatory
<type>	ATM loopback type <b>Valid values:</b> f5-e2e, f5-segment <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.10 cli-config session

**Description** Set CLI max number of connection sessions

**Syntax** cli-config session <number>

**Parameter**

Name	Description
<number>	Set CLI max number of connection sessions <b>Valid values:</b> 1~10 <b>Default value:</b> 5 <b>Type:</b> Mandatory

#### 5.4.11 cli-config timeout

**Description** Set CLI configuration timeout value

**Syntax** cli-config timeout <number>

**Parameter**

Name	Description
<number>	Set CLI connection timeout value <b>Valid values:</b> 180~3600 (sec) <b>Default value:</b> 300 (sec) <b>Type:</b> Mandatory

#### 5.4.12 cluster-cfg domain

**Description** Set cluster domain name

**Syntax** cluster-cfg domain <string>

**Parameter**

Name	Description
<string>	Cluster domain name

	<b>Valid values:</b> (max length 31) <b>Default value:</b> - <b>Type:</b> Mandatory
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#### 5.4.13 cluster-cfg management

**Description** Set cluster management IP configuration

**Syntax** cluster-cfg management {ip <ipv4 address> | netmask <netmask> | gateway <ipv4 address>}

**Parameter**

Name	Description
<ipv4 address>	IP address. <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> 0.0.0.0 <b>Type:</b> Mandatory
<netmask>	Netmask of the management port. <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Optional

#### 5.4.14 cluster-cfg name

**Description** Set the NE name in a cluster

**Syntax** cluster-cfg name <string>

**Parameter**

Name	Description
<string>	A name for NE Identification. <b>Valid values:</b> (max length 31) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.15 cluster-cfg role

**Description** Set cluster role to System-decide or Slave only or Not in a cluster (default)

**Syntax** cluster-cfg role {cluster | slave-only | individual}

**Parameter** None

#### 5.4.16 cluster-cfg voting-key

**Description** Set cluster voting-key for the priority to be a Master

**Syntax** cluster-cfg voting-key <number>

**Parameter**

Name	Description
<number>	Cluster voting key. <b>Valid values:</b> 0 ~ 4294967295 <b>Default value:</b> 0 <b>Type:</b> Mandatory

#### 5.4.17 dot1x

**Description** Go to 802.1x configuration mode

**Syntax** dot1x

**Parameter** None

#### 5.4.18 dot1x disable

**Description** disable 802.1x authentication function of the system

**Syntax** dot1x disable

**Parameter** None

#### 5.4.19 dot1x enable

**Description** Enable 802.1x authentication function of the system

**Syntax** dot1x enable

**Parameter** None

#### 5.4.20 dsl-line-identify dhcp

**Description** Set DHCP Relay Option82 enable/disable

**Syntax** dsl-line-identify dhcp {enable | disable}

**Parameter** None

#### 5.4.21 dsl-line-identify dhcp option82 circuit

**Description** Set DHCP Option82 Circuit ID type (default type is <DSLAM name>:<circuit number>:<vpi>:<vci>, or customer-defined type)

**Syntax** dsl-line-identify dhcp option82 circuit {default | customer}

**Parameter** None

#### 5.4.22 dsl-line-identify dhcp option82 dslam-name

**Description** Set DSLAM name

**Syntax** dsl-line-identify dhcp option82 dslam-name <string>

**Parameter**

Name	Description
<string>	Set DSLAM name (max length 15) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.23 dsl-line-identify dhcp option82 dslam-name-cluster

**Description** Set DSLAM name by Cluster name

**Syntax** dsl-line-identify dhcp option82 dslam-name-cluster

**Parameter** None

#### 5.4.24 dsl-line-identify dhcp option82 dslam-name-customer

**Description** Set DSLAM name by customer defined

**Syntax** dsl-line-identify dhcp option82 dslam-name-customer

**Parameter** None

#### 5.4.25 dsl-line-identify dhcp option82 sub

**Description** Set DHCP Option82 sub mode (send Circuit ID/send Remote ID/send Both)

**Syntax** dsl-line-identify dhcp option82 sub {circuit | remote | both}

**Parameter** None

#### 5.4.26 dsl-line-identify dhcp option82 remote

**Description** Set Remote ID type as Default / Line ID / Line Description / Line phone number / Customer (default type is <DSLAM name>:<bridge port index>; customer type means the customer-defined type)

**Syntax** dsl-line-identify dhcp option82 remote {default | line-id | line-descr | line-phone | customer}

**Parameter** None

#### 5.4.27 dsl-line-identify pppoe srv-name

**Description** Set Service Name

**Syntax** dsl-line-identify pppoe srv-name <string>

**Parameter**

Name	Description
<string>	Set Service name <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.28 dsl-line-identify pppoe srv-name-check

**Description** Disable/Enable PPPoE Service Name check

**Syntax** dsl-line-identify pppoe srv-name-check {disable | enable}

**Parameter** None

#### 5.4.29 fdbstatic <number> {xdsl | gigabit}

**Description** Static MAC forwarding table setting

**Syntax** fdbstatic <number> xdsl <port>/<pvc> vlan <VLAN ID> mac <mac address> {deny | pass}  
fdbstatic <number> gigabit <port> vlan <VLAN ID> mac <mac address> {deny | pass}

**Parameter**

Name	Description
<number>	Static MAC forwarding table number <b>Valid values:</b> 1~512 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<VLAN ID>	VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

<code>&lt;mac address&gt;</code>	MAC address <b>Valid values:</b> xx:xx:xx:xx:xx:xx (xx:00~ff) <b>Default value:</b> - <b>Type:</b> Mandatory
----------------------------------	---

#### 5.4.30 fdbstatic <number> disable

**Description** Disable specify static MAC forwarding entry

**Syntax** fdbstatic <number> disable

**Parameter**

Name	Description
<code>&lt;number&gt;</code>	Static MAC forwarding table number <b>Valid values:</b> 1~512 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.31 fdbstatic list

**Description** Show static MAC forwarding table or specified static MAC forwarding entry

**Syntax** fdbstatic [<number>] list

**Parameter**

Name	Description
<code>&lt;number&gt;</code>	Static MAC forwarding table number <b>Valid values:</b> 1~512 <b>Default value:</b> - <b>Type:</b> Optional

#### 5.4.32 firmware bootcode-upgrade

**Description** Get bootcode from FTP server and write to Flash ROM

**Syntax** firmware bootcode-upgrade <filename>

**Parameter**

Name	Description
<code>&lt;filename&gt;</code>	Boot code path and file name (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.4.33 firmware login

**Description** Login FTP server that firmware image belongs to

**Syntax** firmware login <ipv4 address> username <name> password <password>

**Parameter**

Name	Description
<ipv4 address>	IPV4 address <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Mandatory
<name>	User name (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory
<password>	Input password (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.4.34 firmware partition

**Description** Set booting partition

**Syntax** firmware partition <number>

**Parameter**

Name	Description
<number>	Partition number <b>Valid values:</b> 1~2 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.4.35 firmware upgrade

**Description** Get firmware image from FTP server and write to Flash ROM

**Syntax** firmware upgrade <filename>

**Parameter**

Name	Description
<filename>	Path and File name (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.36 http port

**Description** Set http server listening port

**Syntax** http port <port number>

**Parameter**

Name	Description
port number	The port number. <b>Valid values:</b> Integer range 0-65535 <b>Default value:</b> 80 <b>Type:</b> Mandatory

#### 5.4.37 igmp acl

**Description** IGMP ACL control mode

**Syntax** igmp acl {enable | disable}

**Parameter** None

#### 5.4.38 igmp default

**Description** IGMP set default

**Syntax** igmp [default]

**Parameter** None

#### 5.4.39 igmp deny no-router-alert

**Description** Enable or disable the function that the system will deny IGMP packets that have no router alert option in their IP header. Default is “disable”; the system doesn’t care router alert option.

**Syntax** igmp deny no-router-alert {enable | disable}

**Parameter** None

#### 5.4.40 igmp disable

**Description** Disable snooping mode and proxy mode

**Syntax** igmp disable

**Parameter** None

#### 5.4.41 igmp max-group-limit

**Description** Enable or disable the function that maximum active counter of IGMP groups can be joined for every bridge port will be limited.

**Syntax** igmp max-group-limit {enable | disable}

**Parameter** None



#### 5.4.42 igmp proxy

**Description** Enable GMP proxy snooping mode  
**Syntax** igmp proxy  
**Parameter** None

#### 5.4.43 igmp snooping

**Description** Enable IGMP normal snooping mode  
**Syntax** igmp snooping  
**Parameter** None

#### 5.4.44 igmp rtpport gigabit

**Description** Set IGMP router port (giga1) and set IGMP router IP address  
**Syntax** igmp rtpport gigabit <port> vlan <VLAN ID> [disable | ip <ipv4 address>]  
**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1 <b>Default value:</b> - <b>Type:</b> Mandatory
<VLAN ID>	VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory
<ipv4 address>	Set router IP address for proxy mode IGMP general query packet reference. <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> 0.0.0.0 <b>Type:</b> Optional

#### 5.4.45 igmp rtpport list

**Description** Show IGMP router port list  
**Syntax** igmp rtpport list [<VLAN ID>]  
**Parameter**

Name	Description
<VLAN ID>	VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.46 igmp timeout

**Description** IGMP timeout setting (BC/LMQT/MRT/Query/URI)  
**Syntax** igmp timeout {bc | lmqt | mrt | query | uri} <number>  
**Parameter**

Name	Description
<number>	Timeout value <b>Valid values:</b> 1~500 (second) <b>Default value:</b> BC: 400 LMQT: 1 MRT: 10 Query: 125 URI: 1 <b>Type:</b> Mandatory

#### 5.4.47 igmp version

**Description** Set IGMP protocol version  
**Syntax** igmp version {v1 | v2 | v3}  
**Parameter** None

#### 5.4.48 interface gigabit

**Description** Go to Gigabit Ethernet Interface execution mode from Configure mode  
**Syntax** interface gigabit <port>  
**Parameter**

Name	Description
<port>	Gigabit Ethernet port number <b>Valid values:</b> 1 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.49 interface xdsl

**Description** Go to xDSL Interface execution mode from Configure mode  
**Syntax** interface xdsl <port>  
**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.50 mac-spoofing-detect

**Description** Enable/Disable MAC spoofing detection

**Syntax** mac-spoofing-detect {enable | disable}

**Parameter** None

#### 5.4.51 mac-spoofing-detect log

**Description** Enable/Disable MAC spoofing detection log

**Syntax** mac-spoofing-detect log {enable | disable}

**Parameter** None

#### 5.4.52 management gbe

**Description** Set GBE port IP address

**Syntax** management gbe <ipv4 address>

**Parameter**

Name	Description
ipv4 address	IP address. <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> 0.0.0.0 <b>Type:</b> Mandatory

#### 5.4.53 management gbe vlan

**Description** Set incoming VLAN tag management (only allowing incoming packets with the specified VLAN ID or no limit of VLAN ID)

**Syntax** management gbe vlan <VLAN ID> {no-limit | <VLAN ID>}

**Parameter**

Name	Description
<VLAN ID>	VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.54 management gbe vlan priority

**Description** Set priority level of the inband management traffic sent out from GBE port

**Syntax** management gbe vlan priority <prio ID>

**Parameter**

Name	Description
<prio ID>	Priority ID <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> 0 <b>Type:</b> Mandatory

#### 5.4.55 pm clear

**Description** Clear current performance monitoring data.

**Syntax** pm clear <port>

**Parameter**

Name	Description
<port>	Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.56 port-template mask

**Description** Mask the function (profile) of template line port. Mask means to select this item to be copied to other ports.

**Syntax** port-template mask {xdsl-lineconf | xdsl-profile | xdsl-adminstatus | dsl-identify-trust | pvc-vlan-bridge | igmp-acl | filter | priority-remark | priority-regen | ethernet-policer}

**Parameter** None

#### 5.4.57 port-template unmask

**Description** Unmask the function (profile) of template line port. Un-Mask means not to select this item to be copied to other ports.

**Syntax** port-template unmask {xdsl-lineconf | xdsl-profile | xdsl-adminstatus | dsl-identify-trust | pvc-vlan-bridge | igmp-acl | filter | priority-remark | priority-regen | ethernet-policer}

**Parameter** None

#### 5.4.58 port-template template-port

**Description** Select the template line port and pasted line port (copy configuration from template port)

**Syntax** port-template template-port <port> paste-port <port>

**Parameter**

Name	Description
<port>	XDSL Port number <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.59 priority-list

**Description** Go to Priority-list execution mode from Configure mode.

**Syntax** priority-list

**Parameter** None

#### 5.4.60 priority-queue atm priority

**Description** Set ATM interface priority queue mapping

**Syntax** priority-queue atm priority <prio ID> queue <number>

**Parameter**

Name	Description
<prio ID>	Priority ID <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> 0 <b>Type:</b> Mandatory
<number>	Priority queue value. <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.61 priority-queue atm queue0-weight

**Description** Set weight value of ATM Priority Queue 0

**Syntax** priority-queue atm queue0-weight <number>

**Parameter**

Name	Description
<number>	Weight value of ATM Priority Queue 0 <b>Valid values:</b> 1 ~ 255 <b>Default value:</b> 10 <b>Type:</b> Mandatory

#### 5.4.62 priority-queue atm queue1-weight

**Description** Set weight value of ATM Priority Queue 1

**Syntax** priority-queue atm queue1-weight <number>

**Parameter**

Name	Description
<number>	Weight value of ATM Priority Queue 1 <b>Valid values:</b> 1 ~ 255 <b>Default value:</b> 20 <b>Type:</b> Mandatory

#### 5.4.63 priority-queue atm queue2-weight

**Description** Set weight value of ATM Priority Queue 2

**Syntax** priority-queue atm queue2-weight <number>

**Parameter**

Name	Description
<number>	Weight value of ATM Priority Queue 2 <b>Valid values:</b> 1 ~ 255 <b>Default value:</b> 30 <b>Type:</b> Mandatory

#### 5.4.64 priority-queue atm queue3-weight

**Description** Set weight value of ATM Priority Queue 3

**Syntax** priority-queue atm queue3-weight <number>

**Parameter**

Name	Description
<number>	Weight value of ATM Priority Queue 3 <b>Valid values:</b> 1 ~ 255 <b>Default value:</b> 40 <b>Type:</b> Mandatory

#### 5.4.65 priority-queue atm scheduling

**Description** Set priority queue scheduling only support SPQ mode or support SQP and WFQ modes

**Syntax** priority-queue atm scheduling {sqp | spq-wfq}

**Parameter** None

#### 5.4.66 priority-queue gigabit priority

**Description** Set gigabit interface priority queue mapping

**Syntax** priority-queue atm priority <prio ID> queue <number>

**Parameter**

Name	Description
<prio ID>	Priority ID <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> 0 <b>Type:</b> Mandatory
<number>	Priority queue value. <b>Valid values:</b> 0 ~ 3 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.67 profile alarm

**Description** Enter this command to go to alarm profile configuration mode.

**Syntax** profile alarm

**Parameter** None

#### 5.4.68 profile igmp-acl

**Description** Enter this command to go to IGMP ACL profile configuration mode

**Syntax** profile igmp-acl <profile index>

**Parameter**

Name	Description
<profile index>	Profile index <b>Valid values:</b> 1~15 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.69 profile service adsl

**Description** Enter this command to go to service profile configuration mode or delete a service profile

**Syntax** profile service adsl <profile index> [disable]

**Parameter**

Name	Description
<profile index>	Profile index <b>Valid values:</b> 2 ~ 120

	<b>Default value:</b> - <b>Type:</b> Mandatory
--	---

#### 5.4.70 profile spectrum

**Description** Enter this command to go to spectrum profile configuration mode or delete a spectrum profile

**Syntax** profile spectrum {adsl2 | adsl2plus | readsl2} <profile index>  
[disable]

**Parameter**

Name	Description
profile index	Profile index  <b>Valid values:</b> 2 ~ 120 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.71 profile tca xdsl

**Description** Enter this command to go to TCA profile configuration mode or delete the specified TCA profile

**Syntax** profile tca xdsl <index> [disable]

**Parameter**

Name	Description
<index>	TCA profile index. <b>Valid values:</b> 2~64 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.72 profile rate-limit

**Description** Enter this command to go to rate-limit profile configuration mode

**Syntax** profile tca xdsl <index> [disable]

**Parameter** None



### 5.4.73 remotecfg login

**Description** Login FTP server to get remote configuration and load it to running configuration or write remote configuration to memory

**Syntax** remotecfg login <ipv4 address> get <filename> {load | write partition <number>}

#### Parameter

Name	Description
<ipv4 address>	IP address of TFTP server. <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Mandatory
<filename>	Remote path and file name (max 31 character) <b>Default value:</b> - <b>Type:</b> Mandatory
<number>	Partition number <b>Valid values:</b> 1~2 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.4.74 restore-factory

**Description** Restore factory setting (User needs to restart the system after restore-factory to make the setting take effect.)

**Syntax** restore-factory

**Parameter** None

### 5.4.75 rmon alarm <index> alarm\_interval

**Description** Set RMON alarm interval

**Syntax** rmon alarm <index> alarm\_interval <number>

#### Parameter

Name	Description
<index>	RMON alarm entry index <b>Valid values:</b> 1~64 <b>Default value:</b> - <b>Type:</b> Mandatory
<number>	Alarm interval. <b>Valid values:</b> 0~2147483647 (0: disable)

	<b>Default value:</b> - <b>Type:</b> Mandatory
--	---

#### 5.4.76 rmon alarm <index> delete

**Description** Delete RMON alarm entry

**Syntax** rmon alarm <index> delete <number>

**Parameter**

Name	Description
<index>	RMON alarm entry index <b>Valid values:</b> 1~64 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.77 rmon alarm <index> falling\_eventindex

**Description** Set RMON alarm falling event index

**Syntax** rmon alarm <index> falling\_eventindex <number>

**Parameter**

Name	Description
<index>	RMON alarm entry index <b>Valid values:</b> 1~64 <b>Default value:</b> - <b>Type:</b> Mandatory
<number>	RMON alarm falling event index <b>Valid values:</b> 1~128 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.78 rmon alarm <index> falling\_threshold

**Description** Set RMON alarm falling threshold

**Syntax** rmon alarm <index> falling\_threshold <number>

**Parameter**

Name	Description
<index>	RMON alarm entry index <b>Valid values:</b> 1~64 <b>Default value:</b> - <b>Type:</b> Mandatory

<number>	RMON alarm falling threshold <b>Valid values:</b> 0~4294967295 <b>Default value:</b> - <b>Type:</b> Mandatory
----------	--

#### 5.4.79 rmon alarm <index> owner

**Description** RMON alarm owner

**Syntax** rmon alarm <index> owner <string>

**Parameter**

Name	Description
<string>	Owner name. <b>Valid values:</b> (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.80 rmon alarm <index> rising\_eventindex

**Description** Set RMON alarm rising event index

**Syntax** rmon alarm <index> rising\_eventindex <number>

**Parameter**

Name	Description
<index>	RMON alarm entry index <b>Valid values:</b> 1~64 <b>Default value:</b> - <b>Type:</b> Mandatory
<number>	RMON alarm rising event index <b>Valid values:</b> 1~128 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.81 rmon alarm <index> rising\_threshold

**Description** Set RMON alarm rising threshold

**Syntax** rmon alarm <index> rising\_threshold <number>

**Parameter**

Name	Description
<index>	RMON alarm entry index <b>Valid values:</b> 1~64

	<b>Default value:</b> - <b>Type:</b> Mandatory
<number>	RMON alarm rising threshold <b>Valid values:</b> 0~4294967295 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.82 rmon alarm <index> sample\_type

**Description** RMON alarm sample type (Compared directly with the thresholds or Difference compared with the thresholds)

**Syntax** rmon alarm <index> sample\_type {absolute | delta}

**Parameter**

Name	Description
<index>	RMON alarm entry index <b>Valid values:</b> 1~64 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.83 rmon alarm <index> startup\_alarm

**Description** RMON startup alarm (Rising threshold alarm, Falling threshold alarm or Both rising and falling threshold alarm)

**Syntax** rmon alarm <index> startup\_alarm {rising | falling | both}

**Parameter**

Name	Description
<index>	RMON alarm entry index <b>Valid values:</b> 1~64 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.84 rmon alarm <index> variable

**Description** Source sample in statistic table

Variable	Description
rx_broadcast	Monitoring rx broadcast packets
rx_bytes	Monitoring rx bytes packets
rx_dropped	Monitoring rx dropped packets
rx_err_aligment	Monitoring rx error aligment packets

rx_fragments	Monitoring rx fragments packets
rx_jabber	Monitoring rx jabber packets
rx_multicast	Monitoring rx multicast packets
rx_oversize	Monitoring rx oversize packets
rx_packets	Monitoring rx packets
rx_undersize	Monitoring rx undersize packets
tx_single_collision	Monitoring tx single collision packets
txrx_frames_64	Monitoring tx 64 octets
txrx_frames_127	Monitoring tx 65 to 127 octets
txrx_frames_255	Monitoring tx 128 to 255 octets
txrx_frames_511	Monitoring tx 256 to 511 octets
txrx_frames_1023	Monitoring tx 512 to 1023 octets
txrx_frames_1518	Monitoring tx 1024 to 1518 octets

**Syntax** rmon alarm <index> variable {rx\_broadcast | rx\_bytes | rx\_dropped | rx\_err\_alignment | rx\_fragments | rx\_jabber | rx\_multicast | rx\_oversize | rx\_packets | rx\_undersize} index <number>

rmon alarm <index> variable {tx\_single\_collision | txrx\_frames\_64 | txrx\_frames\_127 | txrx\_frames\_255 | txrx\_frames\_511 | txrx\_frames\_1023 | txrx\_frames\_1518} index <number>

**Parameter**

Name	Description
<index>	RMON alarm entry index <b>Valid values:</b> 1~64 <b>Default value:</b> - <b>Type:</b> Mandatory
<number>	Source index in statistic table <b>Valid values:</b> 1~10 <b>Default value:</b> - <b>Type:</b> Mandatory

**5.4.85 rmon event <index> community**

**Description** Set RMON event community

**Syntax** rmon event <index> community <string>

**Parameter**

Name	Description
<index>	RMON event entry index

	<b>Valid values:</b> 1~128 <b>Default value:</b> - <b>Type:</b> Mandatory
<string>	RMON event community <b>Valid values:</b> string type value. (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.86 rmon event <index> delete

**Description** Delete RMON event entry

**Syntax** rmon event <index> delete

**Parameter**

Name	Description
<index>	RMON event entry index <b>Valid values:</b> 1~128 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.87 rmon event <index> description

**Description** Description for the RMON event

**Syntax** rmon event <index> description <string>

**Parameter**

Name	Description
<index>	RMON event entry index <b>Valid values:</b> 1~128 <b>Default value:</b> - <b>Type:</b> Mandatory
<string>	Event description <b>Valid values:</b> string type value. (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.88 rmon event <index> owner

**Description** Set RMON event owner

**Syntax** rmon event <index> owner <string>

**Parameter**

Name	Description
<index>	RMON event entry index <b>Valid values:</b> 1~128 <b>Default value:</b> - <b>Type:</b> Mandatory
<string>	Owner name <b>Valid values:</b> string type value. (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.89 rmon event <index> type

**Description** Set RMON event type (no alarm, only syslog, only SNMP trap, or both syslog and SNMP trap)

**Syntax** rmon event <index> type {none | log | trap | both}

**Parameter**

Name	Description
<index>	RMON event entry index <b>Valid values:</b> 1~128 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.90 rmon history <index> buckets\_requested

**Description** Set RMON history buckets requested

**Syntax** rmon history <index> buckets\_requested <number>

**Parameter**

Name	Description
<index>	RMON history control entry index <b>Valid values:</b> 1~10 <b>Default value:</b> - <b>Type:</b> Mandatory
<number>	Buckets requested value

	<b>Valid values:</b> 1~65535 <b>Default value:</b> - <b>Type:</b> Mandatory
--	---

#### 5.4.91 rmon history <index> delete

**Description** Delete RMON history entry

**Syntax** rmon history <index> delete

**Parameter**

Name	Description
<index>	RMON history control entry index <b>Valid values:</b> 1~10 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.92 rmon history <index> ifc

**Description** Set Physical interface

**Syntax** rmon history <index> ifc <number>

**Parameter**

Name	Description
<index>	RMON history control entry index <b>Valid values:</b> 1~10 <b>Default value:</b> - <b>Type:</b> Mandatory
<number>	Physical interface index <b>Valid values:</b> 1~2 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.93 rmon history <index> interval

**Description** Set RMON history interval

**Syntax** rmon history <index> interval <number>

**Parameter**

Name	Description
<index>	RMON history control entry index <b>Valid values:</b> 1~10 <b>Default value:</b> -



	<b>Type:</b> Mandatory
<number>	History interval <b>Valid values:</b> 1~3600 (sec) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.94 rmon history <index> owner

**Description** Set RMON history owner

**Syntax** rmon history <index> owner <string>

**Parameter**

Name	Description
<index>	RMON history control entry index <b>Valid values:</b> 1~10 <b>Default value:</b> - <b>Type:</b> Mandatory
<string>	Owner name <b>Valid values:</b> string type value. (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.95 rmon statistic <index> delete

**Description** Delete RMON statistic entry

**Syntax** rmon statistic <index> delete

**Parameter**

Name	Description
<index>	RMON statistic entry index <b>Valid values:</b> 1~10 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.96 rmon statistic <index> ifc

**Description** Set Physical interface

**Syntax** rmon statistic <index> ifc <number>

**Parameter**

Name	Description
<index>	RMON history control entry index <b>Valid values:</b> 1~10 <b>Default value:</b> - <b>Type:</b> Mandatory
<number>	Physical interface index <b>Valid values:</b> 1~2 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.97 rmon statistic <index> owner

**Description** Set RMON statistic owner

**Syntax** rmon statistic <index> owner <string>

**Parameter**

Name	Description
<index>	RMON history control entry index <b>Valid values:</b> 1~10 <b>Default value:</b> - <b>Type:</b> Mandatory
<string>	Owner name <b>Valid values:</b> string type value. (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.98 route

**Description** Add routing to route table

**Syntax** route <ipv4 address > netmask <ipv4 address > gateway <ipv4 address >

**Parameter**

Name	Description
<ipv4 address>	IP address.

	<b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Mandatory
--	---

#### 5.4.99 route default

**Description** Set default route

**Syntax** route default <ipv4 address>

**Parameter**

Name	Description
<ipv4 address>	Default route IP address. <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.100 route delete

**Description** Delete routing from route table

**Syntax** route delete <ipv4 address> netmask <ipv4 address>

**Parameter**

Name	Description
<ipv4 address>	IP address. <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.101 runningcfg active partition

**Description** There are two memory partitions for storing the configuration data. This command allows you to select the flash boot point (partition) for next power-on.

**Syntax** runningcfg active partition <number>

**Parameter**

Name	Description
<number>	Partition number <b>Valid values:</b> 1~2 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.102 runningcfg load partition

**Description** Load running configuration from memory

**Syntax** runningcfg load partition <number>

**Parameter**

Name	Description
<number>	Partition number <b>Valid values:</b> 1~2 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.103 runningcfg login

**Description** Login FTP server

**Syntax** runningcfg login <ipv4 address> put <filename>

**Parameter**

Name	Description
<ipv4 address>	IP address of TFTP server. <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Mandatory
<filename>	Path and File name (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.104 runningcfg write partition

**Description** Write running configuration to memory

**Syntax** runningcfg write partition <number>

**Parameter**

Name	Description
<number>	Partition number <b>Valid values:</b> 1~2 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.105 snmp <index> community

**Description** Set SNMP read only or read/write community string

**Syntax** snmp <index> community {ro | rw} <community>

**Parameter**

Name	Description
------	-------------

<index>	SNMP community index <b>Valid values:</b> 1~32 <b>Default value:</b> - <b>Type:</b> Mandatory
<community>	Community string. (max 31 character; note that community names beginning with a digital number are not allowed) <b>Default value:</b> public <b>Type:</b> Mandatory

#### 5.4.106 snmp notify

**Description** Set SNMP notify information / Delete SNMP notify tag

**Syntax** snmp notify <name> {tag <tag> | delete}

**Parameter**

Name	Description
<name>	Notify name string. (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory
<tag>	Notify Tag string. (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.107 snmp target <name> address

**Description** Set SNMP target address

**Syntax** snmp target <name> address <ipv4 address> port <port>

**Parameter**

Name	Description
<name>	SNMP target name <b>Valid values:</b> (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory
<ipv4 address>	Target IP address <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	SNMP target port <b>Valid values:</b> 1~65535

	<b>Default value:</b> 162 <b>Type:</b> Mandatory
--	---

#### 5.4.108 snmp target <name> delete

**Description** Delete SNMP target tag list

**Syntax** snmp target <name> delete

**Parameter**

Name	Description
<name>	SNMP target name <b>Valid values:</b> (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.109 snmp target <name> tag-list

**Description** Set SNMP target tag list

**Syntax** snmp target <name> tag-list <string>

**Parameter**

Name	Description
<name>	SNMP target name <b>Valid values:</b> (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory
<string>	SNMP target tag list <b>Valid values:</b> (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.110 snmp target <name> version

**Description** Set SNMP target trap version to V1 or V2C

**Syntax** snmp target <name> version {v1 | v2c}

**Parameter**

Name	Description
<name>	SNMP target name <b>Valid values:</b> (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.111 sntp polling interval

**Description** Set SNTP polling interval

**Syntax** sntp polling interval <number>

**Parameter**

Name	Description
number	Polling interval (in seconds) <b>Valid values:</b> 60~65535 <b>Default value:</b> 600 <b>Type:</b> Mandatory

#### 5.4.112 sntp server address

**Description** Set SNTP server ip address

**Syntax** snmp server address <ipv4 address>

**Parameter**

Name	Description
<ipv4 address>	IP address of SNTP server. <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> 0.0.0.0 <b>Type:</b> Mandatory

#### 5.4.113 syslog server

**Description** Set system log server

**Syntax** syslog server <ipv4 address>

**Parameter**

Name	Description
<ipv4 address>	Syslog server IP address <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> 0.0.0.0 <b>Type:</b> Mandatory

#### 5.4.114 tcm color-aware

**Description** Set Color Aware or Color Blind TCM Policer

**Syntax** tcm color-aware {aware | blind}

**Parameter** None

#### 5.4.115 tcm color-field

**Description** Set TCM color field to be VLAN priority or DSCP.

**Syntax** tcm color-field {vprio | dscp}

**Parameter** None

#### 5.4.116 tcm green

**Description** Set TCM green color value

**Syntax** tcm green <number>

**Parameter**

Name	Description
<number>	TCM green color value <b>Valid values:</b> 0 ~ 7 for VLAN priority color field; 0 ~ 63 for DSCP color field <b>Default value:</b> 1 <b>Type:</b> Mandatory

#### 5.4.117 tcm non-conform-pkt

**Description** Set the action for non-conforming packets: discard or tag. If “Tag” is selected, then all the packets will be marked as green, yellow, or red in the Color field.

**Syntax** tcm non-conform-pkt {discard | tag}

**Parameter** None

#### 5.4.118 tcm red

**Description** Set TCM red color value

**Syntax** tcm red <number>

**Parameter**

Name	Description
<number>	TCM red color value <b>Valid values:</b> 0 ~ 7 for VLAN priority color field; 0 ~ 63 for DSCP color field <b>Default value:</b> 7 <b>Type:</b> Mandatory



#### 5.4.119 tcm yellow

**Description** Set TCM yellow color value

**Syntax** tcm yellow <number>

**Parameter**

Name	Description
<number>	TCM yellow color value <b>Valid values:</b> 0 ~ 7 for VLAN priority color field; 0 ~ 63 for DSCP color field <b>Default value:</b> 3 <b>Type:</b> Mandatory

#### 5.4.120 temperature threshold

**Description** Shelf temperature threshold

**Syntax** temperature threshold {up | down | fan} <number>

**Parameter**

Name	Description
<number>	Temperature threshold value. <b>Valid values:</b> up: -55~85 Down: -55~85 fan: -40~15 <b>Default value:</b> up: 65 down: 65 fan: -40 <b>Type:</b> Mandatory

#### 5.4.121 temperature shelf time

**Description** Shelf time

**Syntax** temperature shelf time {up | down} <number>

**Parameter**

Name	Description
<number>	Shelf time value. <b>Valid values:</b> 1~255 <b>Default value:</b> 10 <b>Type:</b> Mandatory

#### 5.4.122 time set date

**Description** Set date of the system (default is current system date)

**Syntax** time set date {MM-DD-YY | MM-DD-CCYY}

**Parameter**

Name	Description
MM	Month. <b>Valid values:</b> 01-12 <b>Type:</b> Mandatory
DD	Day of month. <b>Valid values:</b> 01-31 <b>Type:</b> Mandatory
CC	Century. <b>Valid values:</b> 0 <b>Type:</b> Optional
YY	Short year start from 2000. <b>Valid values:</b> 00-99 <b>Type:</b> Mandatory

#### 5.4.123 time set time

**Description** Set time of the system (default is current system time)

**Syntax** time set time {hh:mm | hh:mm:ss}

**Parameter**

Name	Description
hh	Hour in 24 hour format <b>Valid values:</b> 00-23 <b>Type:</b> Mandatory
mm	Minute. <b>Valid values:</b> 00-59 <b>Type:</b> Mandatory
ss	Second <b>Valid values:</b> 00-59 <b>Type:</b> Optional

## 5.4.124 time set timezone

**Description** Set timezone

**Syntax** time set timezone <timezone>

**Parameter**

Name	Description
timezone	<p>Timezone</p> <p><b>Type:</b> Mandatory</p> <p><b>Valid values:</b> Given below.</p> <p>idl (GMT-12:00) International Date Line</p> <p>idlw (GMT-12:00) International Date Line West</p> <p>nt (GMT-11:00) Nome Time</p> <p>ahst (GMT-10:00) Alaska GMT Hawaii Standard Time</p> <p>hst (GMT-10:00) Hawaiian Standard Time</p> <p>bdst (GMT-10:00) BDT</p> <p>cat (GMT-10:00) Central Alaska Time</p> <p>yst (GMT-09:00) Yukon Standard Time</p> <p>hdt (GMT-09:00) HDT</p> <p>pst (GMT-08:00) Pacific Standard Time</p> <p>ydt (GMT-08:00) YDT</p> <p>mst (GMT-07:00) Mountain Standard Time</p> <p>pdt (GMT-07:00) Pacific Daylight Time</p> <p>cst (GMT-06:00) Central Standard Time</p> <p>mdt (GMT-06:00) Mountain Daylight Time</p> <p>est (GMT-05:00) Eastan Standard Time</p> <p>cdt (GMT-05:00) Central Daylight Time</p> <p>ast (GMT-04:00) Atlantic Standard Time</p> <p>edt (GMT-04:00) Eastan Daylight Time</p> <p>nst (GMT-03:30) Newfoundland Standard Time</p> <p>adt (GMT-03:00) Altantic Daylight Time</p> <p>bst (GMT-03:00) Brazil Standard Time</p> <p>gst (GMT-03:00) Greenland Standard Time</p> <p>at (GMT-02:00) Azores Time</p> <p>wat (GMT-01:00) West Africa Time</p> <p>gmt (GMT) Greenwich Mean Time</p> <p>wet (GMT+00:00) Western European Time</p> <p>ut (GMT+00:00) Universal Time</p> <p>utc (GMT+00:00) Universal Time</p> <p>cet (GMT+01:00) Central European Time</p> <p>met (GMT+01:00) Middle European Time</p> <p>mewt (GMT+01:00) Middle Eruopean Winter Time</p> <p>swt (GMT+01:00) Swedish Winter Time</p> <p>fwt (GMT+01:00) French Winter Time</p> <p>eet (GMT+02:00) Eastean European Time</p> <p>mest (GMT+02:00) Middle European Summer Time</p> <p>fst (GMT+02:00) French Summer Time</p> <p>es (GMT+02:00) Egypt Standard Time</p> <p>ed (GMT+03:00) Egypt Daylight Time</p> <p>bt (GMT+03:00) Baghdad Time</p> <p>it (GMT+03:30) Iran Time</p> <p>zp4 (GMT+04:00) GMT Plus 4 Hours</p> <p>zp5 (GMT+05:00) GMT Plus 5 Hours</p> <p>ist (GMT+05:30) Indian Standard Time</p> <p>zp6 (GMT+06:00) GMT Plus 6 Hours</p> <p>sst (GMT+07:00) South Smatra Time</p> <p>wast (GMT+07:00) West Australian Standard Time</p> <p>jt (GMT+07:30) Java Time</p> <p>cct (GMT+08:00) China Coast Time</p> <p>hst (GMT+08:00) HongKong Standard Time</p>

wadt	(GMT+08:00) West Australian Daylight Time
wst	(GMT+08:00) WST
jst	(GMT+09:00) Japan Standard Time
kst	(GMT+09:00) Korean Standard Time
cast	(GMT+09:30) Central Australian Standard Time
sast	(GMT+09:30) South Australian Standard Time
jdt	(GMT+10:00) JDT
gst	(GMT+10:00) Guam Standard Time
east	(GMT+10:00) East Australian Standard Time
cadt	(GMT+10:30) Central Australian Daylight Time
sadt	(GMT+10:30) South Australian Daylight Time
eadt	(GMT+11:00) East Australian Daylight Time
nzt	(GMT+12:00) New Zealand Time
nzst	(GMT+12:00) New Zealand Standard Time
idle	(GMT+12:00) International Date Line East
nzdt	(GMT+13:00) New Zealand Daylight Time

#### 5.4.125 vlan ethertype s-tag

**Description** Set VLAN S-Tag Ether Type value

**Syntax** vlan ethertype s-tag <number>

**Parameter**

Name	Description
<number>	S-Tag Ether type value <b>Valid values:</b> 0x0001 ~ 0xffff <b>Default value:</b> 0x8100 <b>Type:</b> Mandatory

#### 5.4.126 vlan protocol-base

**Description** Set Protocol Based VLAN table / Delete the specified entry from Protocol Based VLAN table

**Syntax** vlan protocol-base <index> {ethertype <number> vlan <VLAN ID> | disable}

**Parameter**

Name	Description
<index>	Protocol Based VLAN table index. <b>Valid values:</b> 1 ~ 32 <b>Default value:</b> - <b>Type:</b> Mandatory
<number>	Ether type value <b>Valid values:</b> 0x0001 ~ 0xffff <b>Default value:</b> - <b>Type:</b> Mandatory
<VLAN ID>	VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.4.127 vlan-translation <port>/<pvc> <VLAN ID> gigabit <port> one-to-one

**Description** Set one-to-one VLAN translation

### Syntax 1. C-tag reserved

vlan-translation <port>/<pvc> <user port VLAN ID> gigabit <port>  
one-to-one reserved {priority-reserved | priority-replaced <PRIO ID>}

### 2. C-tag replaced

vlan-trans vlan-translation <port>/<pvc> <user port VLAN ID> gigabit  
<port> one-to-one replaced <uplink VLAN ID> {priority-reserved |  
priority-replaced <PRIO ID>}

### 3. Stacking and C-tag reserved

vlan-trans vlan-translation <port>/<pvc> <user port VLAN ID> gigabit  
<port> one-to-one stacking <uplink VLAN ID> {priority-reserved |  
priority-replaced <PRIO ID>}

### 4. Stacking and C-tag replaced

vlan-translation <port>/<pvc> <user port VLAN ID> gigabit <port>  
one-to-one stacking <uplink VLAN ID> ctag-replaced <c-tag VLAN ID>  
<c-tag PRIO ID> {priority-reserved | priority-replaced <PRIO ID>}

### Parameter

Name	Description
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<user port VLAN ID>	ADSL port VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory
<uplink VLAN ID>	Gigabit uplink port VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory
<PRIO ID>	Replaced the priority level of packets out through the uplink port with the

	specified value. <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> - <b>Type:</b> Mandatory
--	---

#### 5.4.128 vlan-translation <port>/<pvc> <VLAN ID> gigabit <port> many-to-one

**Description** Set many-to-one VLAN translation

**Syntax** vlan-translation <port>/<pvc> <user port VLAN ID> gigabit <port>  
 many- to-one replaced <uplink VLAN ID> {priority-reserved |  
 priority-replaced <PRIO ID>}

**Parameter**

Name	Description
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<user port VLAN ID>	ADSL port VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory
<uplink VLAN ID>	Gigabit uplink port VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory
<PRIO ID>	Replaced the priority level of packets out through the uplink port with the specified value. <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.4.129 vlan-translation <port>/<pvc> <VLAN ID> disable

**Description** Delete the specified entry from the VLAN translation table.

**Syntax** vlan-translation <port>/<pvc> <VLAN ID> disable

**Parameter**

Name	Description
<port>	ADSL Port number. <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<VLAN ID>	ADSL port VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.5 Ethernet Interface Mode Commands

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The commands in this section can be executed only in the Ethernet Interface execution mode.

### 5.5.1 bridge

<b>Description</b>	Enter bridge configuration mode / Set bridge port to default status
<b>Syntax</b>	bridge [default]
<b>Parameter</b>	None

### 5.5.2 gbe admin

<b>Description</b>	Set Gigabit Ethernet administrative status (ON/OFF)
<b>Syntax</b>	gbe admin {on   off}
<b>Parameter</b>	None

### 5.5.3 gbe speed

<b>Description</b>	Set Gigabit ethernet speed to auto-negotiate, 100Mbps half duplexing, or 100Mbps full duplexing
<b>Syntax</b>	gbe speed {auto   half_100mbps   full_100mbps }
<b>Parameter</b>	None



## 5.6 Interface Mode Commands

---

The commands in this section can be executed only in the Interface execution mode.

### 5.6.1 bridge

**Description** Enter ATM-bridge configuration mode / Disable bridge port

**Syntax** bridge <bridge id> [disable]

**Parameter**

Name	Description
bridge id	Bridge number. <b>Valid values:</b> 1-8 <b>Default value:</b> 1 <b>Type:</b> Mandatory

### 5.6.2 adsl-config

**Description** Enter adsl configuration mode

**Syntax** adsl-config

**Parameter** None

### 5.6.3 ipoa

**Description** Enter IPoA (RFC 2684) routed mode

**Syntax** ipoa

**Parameter** None

## 5.7 ATM Bridge Mode Commands

---

The commands in this section can be executed only in the ATM Bridge execution mode.

### 5.7.1 accfrm

**Description** Set acceptable frame type (untagged only, tagged only, or all)

**Syntax** accfrm {all | tag | untag}

**Parameter** None

### 5.7.2 accounting disable

**Description** Disable accounting after authentication

**Syntax** accounting disable

**Parameter** None

### 5.7.3 accounting enable

**Description** Enable accounting after authentication

**Syntax** accounting enable

**Parameter** None

### 5.7.4 auth disable

**Description** Disable port authentication

**Syntax** auth disable

**Parameter** None

### 5.7.5 auth enable

**Description** Enable port authentication

**Syntax** auth enable

**Parameter** None

### 5.7.6 auth-sever-timeout

**Description** 802.1x Timeout for Radius Retries

**Syntax** auth-server-timeout <number>

**Parameter**

Name	Description
<number>	Timeout for Radius Retries <b>Valid values:</b> 1 ~ 65534 <b>Default value:</b> 60 <b>Type:</b> Mandatory

### 5.7.7 auth-supp-timeout

**Description** 802.1x Timeout for requesting the supplicant to retry

**Syntax** auth-supp-timeout <number>

**Parameter**

Name	Description
<number>	Timeout for Supplicant retries <b>Valid values:</b> 1 ~ 65534 <b>Default value:</b> 60 <b>Type:</b> Mandatory

### 5.7.8 auth-tx-period

**Description** 802.1x Timeout for Supplicant Re-transmissions before sending the request

**Syntax** auth-tx-period <number>

**Parameter**

Name	Description
<number>	Timeout for Supplicant Re-transmissions <b>Valid values:</b> 1 ~ 65534 <b>Default value:</b> 60 <b>Type:</b> Mandatory

### 5.7.9 default vlan

**Description** Set default VLAN ID for a bridge port

**Syntax** default vlan <VLAN ID>

**Parameter**

Name	Description
<VLAN ID>	VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> 1 <b>Type:</b> Mandatory

### 5.7.10 default prio

**Description** Set default priority value for a bridge port

**Syntax** default prio <prio ID>

**Parameter**

Name	Description
<prio ID>	Priority ID <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> 0 <b>Type:</b> Mandatory

### 5.7.11 dhcp-relay

**Description** Enable/disable DHCP relay, or Set circuit ID/remote ID for identifying the subscriber

**Syntax** dhcp-relay {trusted | untrusted | circuit <circuit ID> | remote <remote ID>}

**Parameter**

Name	Description
<circuit ID>	Circuit ID <b>Valid values:</b> string type (max length 48) <b>Default value:</b> - <b>Type:</b> Mandatory
<remote ID>	Remote ID <b>Valid values:</b> string type (max length 48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.7.12 egress

**Description** Default PVID egress tagged/untagged setting

**Syntax** egress {tag | untag}

**Parameter** None

### 5.7.13 force priority

**Description** Force priority setting (**disabled**: reserve the original priority of all packets. **egress**: force the priority value of all packets sent out from this bridge port's default VLAN to be the default VLAN priority, so this rule only works on default VLAN of this bridge port. **ingress**: force applying the default VLAN priority value to all the packets received on this bridge port (so this rule will work on all the member-set of this bridge port). **both**: combine the rules of Ingress and Egress.

**Syntax** force priority {disable | engress | ingress | both}

**Parameter** None

### 5.7.14 igmp-acl bind

**Description** IGMP ACL (Access Control List) binding profile configuration

**Syntax** igmp-acl bind {<number> [on] | on | off | reset}

**Parameter**

Name	Description
<number>	IGMP ACL profile index. <b>Valid values:</b> 1 ~ 15 <b>Default value:</b> 0 <b>Type:</b> Mandatory

### 5.7.15 igmp-acl max-group

**Description** Per port limit IGMP join group number

**Syntax** igmp-acl max-group <number>

**Parameter**

Name	Description
<number>	IGMP ACL profile index. <b>Valid values:</b> 1 ~ 128 <b>Default value:</b> 8 <b>Type:</b> Mandatory

### 5.7.16 ingress

**Description** Enable/disable ingress filter mode

**Syntax** ingress {enable | disable}

**Parameter** None

### 5.7.17 interim-interval

**Description** 802.1x Timeout for Accounting Information Update

**Syntax** interim-interval <number>

**Parameter**

Name	Description
<number>	Timeout for Accounting Information Updated. <b>Valid values:</b> 60 ~ 600 <b>Default value:</b> 300 <b>Type:</b> Mandatory

### 5.7.18 ip-allowed

**Description** Enable/disable IP allowed function (user can specify allowed source IP address per bridge port)

**Syntax** ip-allowed {enable | disable}

**Parameter** None

### 5.7.19 isolation

**Description** Enable/Disable default PVID isolation setting

**Syntax** isolation [disable]

**Parameter** None

### 5.7.20 mac-learning

**Description** Enable/disable MAC learning ability of a bridge port

**Syntax** max-learning {enable | disable}

**Parameter** None

### 5.7.21 max-reauth-req

**Description** 802.1x Max No. of Retries to supplicant (sending requests to the authentication server if no response is received)

**Syntax** max-reauth-req <number>

#### Parameter

Name	Description
<number>	Max number of retries. <b>Valid values:</b> 1~ 10 <b>Default value:</b> 2 <b>Type:</b> Mandatory

### 5.7.22 max-req

**Description** 802.1x Max No. of Retries to supplicant for EAP-Request frames of types other than EAP-Request / Identity

**Syntax** max-req <number>

#### Parameter

Name	Description
<number>	Max number of retries. <b>Valid values:</b> 1~ 10 <b>Default value:</b> 2 <b>Type:</b> Mandatory

### 5.7.23 max-mac

**Description** Set the maximum users allowed to access Internet based on user MAC address counter on per ATM PVC basis

**Syntax** max-mac <number>

#### Parameter

Name	Description
<number>	Maximum number of the MAC addresses <b>Valid values:</b> 1 ~ 128 <b>Default value:</b> 0 <b>Type:</b> Mandatory

### 5.7.24 port-control auto

**Description** Auto (default)

**Syntax** Set to the system default authentication state for the port

**Parameter** none

### 5.7.25 port-control force-authorized

**Description** Force this port authorized state

**Syntax** port-control force-authorized

**Parameter** none

### 5.7.26 port-control force-unauthorized

**Description** Force this port unauthorized state

**Syntax** port-control force-unauthorized

**Parameter** none

### 5.7.27 priority-regen

**Description** VLAN priority value regeneration or Delete VLAN priority tag filter

**Syntax** priority-regen incoming <incoming prio> {outgoing <outgoing prio> | disable}

**Parameter**

Name	Description
<incoming prio>	Incoming VLAN priority value <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> - <b>Type:</b> Mandatory
<outgoing prio>	Outgoing VLAN priority value <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.7.28 protocol-base

**Description** Enable/disable protocol-based VLAN

**Syntax** protocol-base {enable | disable}

**Parameter** None



### 5.7.29 pvc

**Description** Set VPI and VCI

**Syntax** pvc <VPI>/<VCI>

**Parameter**

Name	Description
<VPI>	Virtual Path Identifier. <b>Valid values:</b> 0 ~ 255 <b>Default value:</b> 0 <b>Type:</b> Mandatory
<VCI>	Virtual Channel Identifier. <b>Valid values:</b> 21, 32~65535 <b>Default value:</b> 35 <b>Type:</b> Mandatory

### 5.7.30 pvc atmdesc

**Description** List ATM traffic descriptor

**Syntax** pvc atmdesc

**Parameter** None

### 5.7.31 pvc atmdesc plc

**Description** Set ATM police (Rx) descriptor

**Syntax** pvc atmdesc plc <number>

**Parameter**

Name	Description
<number>	ATM descriptor number. <b>Valid values:</b> Enter 'pvc atmdesc' command to see the descriptor list. <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.7.32 pvc atmdesc shp

**Description** Set ATM shaped (Tx) descriptor

**Syntax** pvc atmdesc shp <number>

**Parameter**

Name	Description
<number>	ATM descriptor number. <b>Valid values:</b> Enter 'pvc atmdesc' command to see the descriptor list. <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.7.33 pvc encapsulation

**Description** Set Encapsulation type

**Syntax** pvc encapsulation {llc | vcmux | auto}

**Parameter** None

**Note:** The IDL-2402 supports auto-detection of the ATM AAL5 encapsulation method, LLC or VC-Mux. Meanwhile, the IDL-2402 is also able to automatically sense the following protocol encapsulations: PPPoE over ATM (per RFC 2684), IPoE over ATM bridge mode, and PPP over ATM. IPoA works on individual PVC.

However, there are limitations on auto-detection of encapsulations:

1. LLC/VC-Mux automatically detection is only applicable to PVC#1 ~ PVC#4 of each ADSL port. PVC#5 ~ PVC#8 must be assigned the ATM AAL5 encapsulation method manually.
2. PPPoA works only for PVC#1 ~ PVC#4.

Refer to section 5.11 for IPoA configuration commands.

### 5.7.34 quiet-period

**Description** 802.1x Quiet Period in Seconds (The period that 802.1x system stay in the quiet state)

**Syntax** quiet-period <number>

**Parameter**

Name	Description
<number>	Timeout for quiet period.

	<b>Valid values:</b> 1~ 65534. <b>Default value:</b> 60 <b>Type:</b> Mandatory
--	--

### 5.7.35 reauthentication disable

**Description** Disable Reauthentication for this port

**Syntax** reauthentication disable

**Parameter** none

### 5.7.36 reauthentication enable

**Description** Enable Reauthentication for this port

**Syntax** reauthentication enable

**Parameter** none

### 5.7.37 reauth-period

**Description** 802.1x Time after which an automatic re-authentication should be initiated

**Syntax** reauth-period <number>

**Parameter**

Name	Description
<number>	Re-authentication period. <b>Valid values:</b> 1~ 65534. <b>Default value:</b> 3600 <b>Type:</b> Mandatory

### 5.7.38 stack

**Description** Enable/disable VLAN stacking

**Syntax** stack {enable | disable}

**Parameter** None

### 5.7.39 stack tls port enable

**Description** Enable VLAN stack TLS (transparent LAN service) port

**Syntax** stack tls port {enable | disable}

**Parameter** None

### 5.7.40 tcm-policer

**Description** Bind/Unbind Three Color Marking (TCM) Policer profile

**Syntax** tcm-policer <number> {bind | unbind}

**Parameter**

Name	Description
<number>	TCM policer profile index. <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.7.41 vlan <VLAN ID> disable

**Description** Delete a VLAN from memberset table

**Syntax** vlan <VLAN ID> disable

**Parameter**

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.7.42 vlan <VLAN ID> list

**Description** Show memberset setting by VLAN

**Syntax** vlan <VLAN ID> list

**Parameter**

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.7.43 vlan <VLAN ID> priority

**Description** Set VLAN memberset priority (specify priority level or reserved the original priority, tag or untag, enable or disable port isolation)

**Syntax** vlan <VLAN ID> priority {<prio ID> | reserved} {tag | untag} isolation [disable]

#### Parameter

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority ID <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> 0 <b>Type:</b> Mandatory

### 5.7.44 vlan list

**Description** Show memberset setting by VLAN

**Syntax** vlan list

**Parameter** None

## 5.8 GBE Bridge Mode Commands

---

The commands in this section can be executed only in the GBE Bridge execution mode.

### 5.8.1 accfrm

**Description** Set acceptable frame type (untagged only, tagged only, or all)

**Syntax** accfrm {all | tag | untag}

**Parameter** None

### 5.8.2 default vlan

**Description** Set default VLAN ID for a bridge port

**Syntax** default vlan <VLAN ID>

**Parameter**

Name	Description
<VLAN ID>	VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> 1 <b>Type:</b> Mandatory

### 5.8.3 default prio

**Description** Set default priority value for a bridge port

**Syntax** default prio <prio ID>

**Parameter**

Name	Description
<prio ID>	Priority ID <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> 0 <b>Type:</b> Mandatory

### 5.8.4 egress

**Description** Default PVID egress tagged/untagged setting

**Syntax** egress {tag | untag}

**Parameter** None

### 5.8.5 ingress

**Description** Enable/disable ingress filter mode

**Syntax** ingress {enable | disable}

**Parameter** None

### 5.8.6 isolation

**Description** Enable/Disable default PVID isolation setting

**Syntax** isolation [disable]

**Parameter** None

### 5.8.7 link mode

**Description** Set link mode (uplink mode or user mode)

**Syntax** link mode {uplink | user}

**Parameter** None

### 5.8.8 max-mac

**Description** Set the maximum users allowed to access Internet based on user MAC address counter on per ATM PVC basis

**Syntax** max-mac <number>

**Parameter**

Name	Description
<number>	Maximum number of the MAC addresses <b>Valid values:</b> 1 ~ 4096 for GBE interface, 1 ~ 128 for ADSL interface. <b>Default value:</b> 0 <b>Type:</b> Mandatory

### 5.8.9 priority-regen

**Description** VLAN priority value regeneration or Delete VLAN priority tag filter

**Syntax** priority-regen incoming <incoming prio> {outgoing <outgoing prio> | disable}

**Parameter**

Name	Description
<incoming prio>	Incoming VLAN priority value

	<b>Valid values:</b> 0 ~ 7 <b>Default value:</b> - <b>Type:</b> Mandatory
<outgoing prio>	Outgoing VLAN priority value <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.8.10 stack

**Description** Enable/disable VLAN stacking

**Syntax** stack {enable | disable}

**Parameter** None

### 5.8.11 tcm-policer

**Description** Bind/Unbind Three Color Marking (TCM) Policer profile

**Syntax** tcm-policer <number> {bind | unbind}

**Parameter**

Name	Description
<number>	TCM policer profile index. <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.8.12 vlan <VLAN ID> disable

**Description** Delete a VLAN from memberset table

**Syntax** vlan <VLAN ID> disable

**Parameter**

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory



### 5.8.13 vlan <VLAN ID> list

**Description** Show memberset setting by VLAN

**Syntax** vlan <VLAN ID> list

**Parameter**

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.8.14 vlan <VLAN ID> priority

**Description** Set VLAN memberset priority (specify priority level or reserved the original priority, tag or untag, enable or disable port isolation)

**Syntax** vlan <VLAN ID> priority {<prio ID> | reserved} {tag | untag} isolation [disable]

**Parameter**

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority ID <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> 0 <b>Type:</b> Mandatory

### 5.8.15 vlan list

**Description** Show memberset setting by VLAN

**Syntax** vlan list

**Parameter** None

## 5.9 GBE-LA Bridge Mode Commands

---

### 5.9.1 accfrm

**Description** Set acceptable frame type (untagged only, tagged only, or all)

**Syntax** accfrm {all | tag | untag}

**Parameter** None

### 5.9.2 default vlan

**Description** Set default VLAN ID for a bridge port

**Syntax** default vlan <VLAN ID>

**Parameter**

Name	Description
<VLAN ID>	VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> 1 <b>Type:</b> Mandatory

### 5.9.3 default prio

**Description** Set default priority value for a bridge port

**Syntax** default prio <prio ID>

**Parameter**

Name	Description
<prio ID>	Priority ID <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> 0 <b>Type:</b> Mandatory

### 5.9.4 egress

**Description** Default PVID egress tagged/untagged setting

**Syntax** egress {tag | untag}

**Parameter** None

### 5.9.5 ingress

**Description** Enable/disable ingress filter mode

**Syntax** ingress {enable | disable}

**Parameter** None

### 5.9.6 isolation

**Description** Enable/Disable default PVID isolation setting

**Syntax** isolation [disable]

**Parameter** None

### 5.9.7 link mode

**Description** Set link mode (uplink mode or user mode)

**Syntax** link mode {uplink | user}

**Parameter** None

### 5.9.8 max-mac

**Description** Set the maximum users allowed to access Internet based on user MAC address counter on per ATM PVC basis

**Syntax** max-mac <number>

**Parameter**

Name	Description
<number>	Maximum number of the MAC addresses <b>Valid values:</b> 1 ~ 4096 <b>Default value:</b> 0 <b>Type:</b> Mandatory

### 5.9.9 priority-regen

**Description** VLAN priority value regeneration or Delete VLAN priority tag filter

**Syntax** priority-regen incoming <incoming prio> {outgoing <outgoing prio> | disable}

**Parameter**

Name	Description
<incoming prio>	Incoming VLAN priority value <b>Valid values:</b> 0 ~ 7

	<b>Default value:</b> - <b>Type:</b> Mandatory
<outgoing prio>	Outgoing VLAN priority value <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.9.10 stack

**Description** Enable/disable VLAN stacking

**Syntax** stack {enable | disable}

**Parameter** None

### 5.9.11 tcm-policer

**Description** Bind/Unbind Three Color Marking (TCM) Policer profile

**Syntax** tcm-policer <number> {bind | unbind}

**Parameter**

Name	Description
<number>	TCM policer profile index. <b>Valid values:</b> 1~24(48) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.9.12 vlan <VLAN ID> disable

**Description** Delete a VLAN from memberset table

**Syntax** vlan <VLAN ID> disable

**Parameter**

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.9.13 vlan <VLAN ID> list

**Description** Show memberset setting by VLAN

**Syntax** vlan <VLAN ID> list

**Parameter**

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.9.14 vlan <VLAN ID> priority

**Description** Set VLAN memberset priority (specify priority level or reserved the original priority, tag or untag, enable or disable port isolation)

**Syntax** vlan <VLAN ID> priority {<prio ID> | reserved} {tag | untag} isolation [disable]

**Parameter**

Name	Description
VLAN ID	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority ID <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> 0 <b>Type:</b> Mandatory

### 5.9.15 vlan list

**Description** Show memberset setting by VLAN

**Syntax** vlan list

**Parameter** None

## 5.10 ADSL Configure Mode Commands

---

The commands in this section can be executed only in the ADSL Config mode.

### 5.10.1 line mode carrier

- Description** Set/Clear xDSL line carrier
- Syntax** line mode carrier {on | off | oninit}
- Parameter** None

### 5.10.2 line mode diagnostic

- Description** Set/Clear xDSL line diagnostics
- Syntax** line mode diagnostic {init | off}
- Parameter** None

### 5.10.3 line mode force-l3

- Description** Set force to power management L3 mode or not
- Syntax** line mode force-l3 {on | off}
- Parameter** None

### 5.10.4 line mode mask

- Description** Set/Clear xDSL line Operational mode mask
- Syntax** line mode mask {set | clear } <opmode ID>
- Parameter**

Name	Description
<opmode id>	The ID of allowed ADSL modes of operation. <b>Valid values:</b> Use 'list opmode' command to see all the operation modes. Or refer to Table A-1. <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.10.5 line port

**Description** Set xDSL line port information

**Syntax** line port {id <id> | description <desc> | phone <phone number>}

**Parameter**

Name	Description
<id>	Line ID name (max 32 characters) <b>Default value:</b> - <b>Type:</b> Mandatory
<desc>	Line port description (max 48 character) <b>Default value:</b> - <b>Type:</b> Mandatory
<phone number>	Phone number. (max 32 characters) <b>Valid values:</b> no limit format <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.10.6 line profile

**Description** Create xDSL line profile

**Syntax** line profile {service | spectrum | tca} <number>

**Parameter**

Name	Description
<number>	Profile index. <b>Valid values:</b> 1~120 (1~64 for tca profile) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.10.7 line status service

**Description** Set xDSL line service status (service ON/OFF/RESET)

**Syntax** line status service {on | off | reset}

**Parameter** None

## 5.11 IPoA Configure Mode Commands

---

The commands in this section can be executed only in the IPoA configure mode.

### 5.11.1 brasmac

**Description** Display Broadband RAS MAC address by index

**Syntax** brasmac <number>

**Parameter**

Name	Description
<number>	Broadband RAS MAC Table Index <b>Valid values:</b> 1 ~ 48 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.11.2 brasmac list

**Description** Show Broadband RAS MAC address table

**Syntax** brasmac list

**Parameter** None

### 5.11.3 cpriority

**Description** Customer VLAN Priority setting

**Syntax** cpriority <prio ID>

**Parameter**

Name	Description
<prio ID>	Customer VLAN Priority value <b>Valid values:</b> 0 ~ 7 <b>Default value:</b> - <b>Type:</b> Mandatory



#### 5.11.4 cvlan

**Description** Customer VLAN setting

**Syntax** cvlan <VLAN ID>

**Parameter**

Name	Description
<prio ID>	Customer VLAN ID number <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.11.5 ipoa-status

**Description** IPoA Status setting (enable/disable IPoA)

**Syntax** ipoa-status {enable | disable}

**Parameter** None

#### 5.11.6 max-mac

**Description** Port based allowed maximum number of MAC addresses

**Syntax** max-mac <number>

**Parameter**

Name	Description
<number>	Number of MAC addresses <b>Valid values:</b> 1 ~ 128 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.11.7 pvc

**Description** Set VPI and VCI

**Syntax** pvc <VPI>/<VCI>

**Parameter**

Name	Description
<VPI>	Virtual Path Identifier. <b>Valid values:</b> 0 ~ 255 <b>Default value:</b> 0 <b>Type:</b> Mandatory

<b>&lt;VCI&gt;</b>	Virtual Channel Identifier. <b>Valid values:</b> 21, 32~65535 <b>Default value:</b> 35 <b>Type:</b> Mandatory
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### 5.11.8 pvc atmdesc

**Description** List ATM traffic descriptor

**Syntax** pvc atmdesc

**Parameter** None

### 5.11.9 pvc atmdesc plc

**Description** Set ATM police (Rx) descriptor

**Syntax** pvc atmdesc plc <number>

**Parameter**

Name	Description
<number>	ATM descriptor number. <b>Valid values:</b> Enter 'pvc atmdesc' command to see the descriptor list. <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.11.10 pvc atmdesc shp

**Description** Set ATM shaped (Tx) descriptor

**Syntax** pvc atmdesc shp <number>

**Parameter**

Name	Description
<number>	ATM descriptor number. <b>Valid values:</b> Enter 'pvc atmdesc' command to see the descriptor list. <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.11.11 pvc encapsulation

**Description** Set Encapsulation type

**Syntax** pvc encapsulation {llc | vcmux}

**Parameter** None

### 5.11.12 uplink gigabit

**Description** Set GBE uplink mode

**Syntax** uplink <port>

**Parameter**

Name	Description
<port>	Gigabit Ethernet port number. <b>Valid values:</b> 1 <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.12 Access List Mode Commands

---

The commands in this section can be executed only in the ACL execution mode.

### 5.12.1 bcrate cir

**Description** Broadcast rate limiting CIR and LBS setting

**Syntax** bcrate cir <cir> lbs <lbs>

**Parameter**

Name	Description
<cir>	Committed Information Rate (bps) <b>Valid values:</b> 1536 ~ 1000000000 <b>Default value:</b> 80000 <b>Type:</b> Mandatory
<lbs>	Leakage Bucket Size (millisecond) <b>Valid values:</b> 1 ~ 1024 <b>Default value:</b> 80 <b>Type:</b> Mandatory

### 5.12.2 bcrate list

**Description** Show broadcast rate limiting list

**Syntax** bcrate list

**Parameter** None

### 5.12.3 dstmac

**Description** Specify destination MAC address of packets to filter / Show specified destination MAC deny access list entry / Delete specified destination MAC deny access list entry

**Syntax** dstmac <number> deny {xDSL <port>/<pvc> | gigabit <port>} mac <mac address>

dstmac <number> list

dstmac <number> disable

**Parameter**

Name	Description
<number>	Destination MAC deny access list number

	<b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<mac address>	Destination MAC address <b>Valid values:</b> xx:xx:xx:xx:xx:xx (xx:00~ff) <b>Default value:</b> 00:00:00:00:00:00 <b>Type:</b> Mandatory

#### 5.12.4 dstmac list

<b>Description</b>	Display destination MAC deny access list
<b>Syntax</b>	dstmac list
<b>Parameter</b>	None

#### 5.12.5 dstip

<b>Description</b>	Specify destination IP address of packets to filter / Show specified destination IP deny access list entry / Delete specified destination IP deny access list entry
<b>Syntax</b>	dstip <number> deny {xDSL <port>/<pvc>   gigabit <port>} ip <ipv4 address> <netmask> dstip <number> list dstip <number> disable
<b>Parameter</b>	

Name	Description
<number>	Destination IP deny access list number <b>Valid values:</b> 1~256

	<b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<ipv4 address>	Destination IP address <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> 0.0.0.0 <b>Type:</b> Mandatory
<netmask>	Subnet mask <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Optional

### 5.12.6 dstip list

<b>Description</b>	Display destination IP deny access list
<b>Syntax</b>	dstip list
<b>Parameter</b>	None

### 5.12.7 ethertype

<b>Description</b>	Specify Ether Type of packets to filter / Show specified Ether Type deny access list entry / Delete specified Ether Type deny access list entry
<b>Syntax</b>	ethertype <number> deny {xdsl <port>/<pvc>   gigabit <port>} type <ethertype> ethertype <number> list ethertype <number> disable
<b>Parameter</b>	

Name	Description
<number>	Ether Type deny access list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<ethertype>	Ether Type value <b>Valid values:</b> 0x0001 ~ 0xffff <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.12.8 ethertype list

**Description** Display Ether Type deny access list

**Syntax** ethertype list

**Parameter** None

### 5.12.9 ip-allowed

**Description** Specify allowed source IP addresss of packets to filter / Show allowed IP access list entry / Delete specified allowed IP from access list

**Syntax** ip-allowed <number> allow xdsl <port>/<pvc> srcip <ipv4 address>  
vlan <VLAN ID>

ip-allowed <number> list

ip-allwowed <number> disable

**Parameter**

Name	Description
<number>	Static IP allow access list number

	<b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<ipv4 address>	Allowed source IP address <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> 0.0.0.0 <b>Type:</b> Mandatory
<VLAN ID>	IP Allowed entry VLAN ID number <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Optional

### 5.12.10 ip-allowed list

**Description** Display static IP allow access list

**Syntax** ip-allowed list

**Parameter** None

### 5.12.11 ipprotocol

**Description** Specify IP Protocol of packets to reject / Show specify IP protocol access list entry / Delete specify IP protocol deny access list entry

**Syntax** ipprotocol <number> deny {xDSL <port>/<pvc> | gigabit <port>}  
protocol <protocol>

ipprotocol <number> list

ipprotocol <number> disable

**Parameter**



Name	Description
<number>	IP Protocol deny access list number <b>Valid values:</b> 1-256 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
protocol	Input protocol name. <b>Valid values:</b> icmp (ICMP) Internet Control Message <1> igmp (IGMP) Internet Group Management <2> ipinip IP in IP (encapsulation) <4> tcp (TCP) Transmission Control <6> grp (GRP) Globin Reduction Protocol <7> igp (IGP) Any private interior gateway <9> udp (UDP) User Datagram <17> gre (GRE) General Routing Encapsulation <47> eigrp EIGRP <88> ospf OSPF <89> <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.12.12 ipprotocol list

**Description** Display IP protocol deny access list

**Syntax** ipprotocol list

**Parameter** None

## 5.12.13 l4dstport

**Description** Specify L4 dest port of packets to reject / Show specify L4 dest port access list entry / Delete specify L4 dest port deny access list entry

**Syntax** l4dstport <number> deny {xdsl <port>/<pvc> | gigabit <port>} port <port number>

l4dstport <number> list

l4dstport <number> disable

### Parameter

Name	Description
<number>	L4 dest port deny access list number <b>Valid values:</b> 1-256 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<port number>	L4 destination port number <b>Valid values:</b> 1-65535 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.12.14 I4dstport list

**Description** Display L4 dest port deny access list

**Syntax** I4dstport list

**Parameter** None

### 5.12.15 mcfldrate list

**Description** Display flooding rate limiting list

**Syntax** mcfldrate list

**Parameter** None

### 5.12.16 mcfldrate vlan

**Description** Display flooding rate limiting list

**Syntax** mcfldrate vlan <VLAN ID> {list | disable | cir <cir> lbs <lbs>}

**Parameter**

Name	Description
<VLAN ID>	VLAN ID <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory
<cir>	Committed Information Rate (bps) <b>Valid values:</b> 1536 ~ 1000000000 <b>Default value:</b> 80000 <b>Type:</b> Mandatory
<lbs>	Leakage Bucket Size (millisecond) <b>Valid values:</b> 1 ~ 1024 <b>Default value:</b> 80 <b>Type:</b> Mandatory

### 5.12.17 srcip

**Description** Specify source IP address of packets to filter / Show specify source IP deny access list entry / Delete specify source IP deny access list entry

**Syntax** srcip <number> deny {xdsl <port>/<pvc> | gigabit <port>} ip <ipv4 address> <net mask>

srcip <number> list

srcip <number> disable

### Parameter

Name	Description
<number>	Source IP deny access list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<ipv4 address>	Destination IP address <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> 0.0.0.0 <b>Type:</b> Mandatory
<netmask>	Subnet mask <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Optional

### 5.12.18 srcip list

**Description** Display source IP deny access list

**Syntax** srcip list

**Parameter** None

## 5.12.19 srcmac

**Description** Specify source MAC of packets to reject / Show specify source MAC deny access list entry / Delete specify source MAC deny access list entry

**Syntax** srcmac <number> deny {xdsl <port>/<pvc> | gigabit <port>} mac <mac address>

srcmac <number> list

srcmac <number> disable

### Parameter

Name	Description
<number>	Source MAC deny access list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<mac address>	MAC address <b>Valid values:</b> xx:xx:xx:xx:xx:xx (xx:00~ff) <b>Default value:</b> 00:00:00:00:00:00 <b>Type:</b> Mandatory

## 5.12.20 srcmac list

**Description** Display source MAC deny access list

**Syntax** srcmac list

**Parameter** None

## 5.13 ATM Description Mode Commands

---

### 5.13.1 cbr

**Description** CBR traffic setting

**Syntax** cbr <index> pcr <pcr> cdvt <cdvt>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory
<pcr>	Peak cell rate number <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<cdvt>	Cell Delay Variation Tolerance <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.13.2 no atmdesc

**Description** Delete ATM Description

**Syntax** no atmdesc <number>

**Parameter**

Name	Description
<number>	ATM Description number <b>Valid values:</b> 1~251 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.13.3 ubr1

**Description** UBR type 1 traffic setting (atmNoClpNoScrCdvt)

**Syntax** ubr1 <index> pcr <pcr> cdvt <cdvt>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory
<pcr>	Peak cell rate number <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<cdvt>	Cell Delay Variation Tolerance <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.13.4 ubr2

**Description** UBR type 2 traffic setting (atmNoClpTaggingNoScr)

**Syntax** ubr2 <index> pcr <pcr> cdvt <cdvt>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory
<pcr>	Peak cell rate number <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<cdvt>	Cell Delay Variation Tolerance

	<b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
--	---

### 5.13.5 unshp

**Description** unshaped traffic setting (atmNoTrafficDescriptor)

**Syntax** unshp <index>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.13.6 vbr1

**Description** VBR type 1 traffic setting (atmNoClpScrCdvT)

**Syntax** vbr1 <index> pcr <pcr> cdvt <cdvt> scr <scr> mbs <mbs>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory
<pcr>	Peak cell rate number <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<cdvt>	Cell Delay Variation Tolerance <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<scr>	Sustained Cell Rate



	<b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<mbs>	Maximum Burst Size <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.13.7 vbr2

**Description** VBR type 2 traffic setting (atmClpNoTaggingScrCdvT)

**Syntax** vbr2 <index> pcr <pcr> cdvt <cdvt> scr <scr> mbs <mbs>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory
<pcr>	Peak cell rate number <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<cdvt>	Cell Delay Variation Tolerance <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<scr>	Sustained Cell Rate <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<mbs>	Maximum Burst Size <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.13.8 vbr3

**Description** VBR type 3 traffic setting (atmClpTaggingScrCdvT)

**Syntax** vbr3 <index> pcr <pcr> cdvt <cdvt> scr <scr> mbs <mbs>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory
<pcr>	Peak cell rate number <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<cdvt>	Cell Delay Variation Tolerance <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<scr>	Sustained Cell Rate <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<mbs>	Maximum Burst Size <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.13.9 ubr-shp

**Description** UBR shaped traffic setting (atmNoClpNoScr)

**Syntax** ubr-shp <index> pcr <pcr>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory
<pcr>	Peak cell rate number <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.13.10 cbr-shp

**Description** CBR shaped traffic setting (atmClpTransparentNoScr)

**Syntax** cbr-shp <index> pcr <pcr> cdvt <cdvt>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory
<pcr>	Peak cell rate number <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<cdvt>	Cell Delay Variation Tolerance <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.13.11 vbr-shp

**Description** VBR shaped traffic setting (atmClpTransparentScr)

**Syntax** vbr-shp <index> pcr <pcr> cdvt <cdvt> scr <scr> mbs <mbs>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory
<pcr>	Peak cell rate number <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<cdvt>	Cell Delay Variation Tolerance <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<scr>	Sustained Cell Rate <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<mbs>	Maximum Burst Size <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.13.12 vbrnrt

**Description** VBR-nrt shaped traffic setting (atmClpNoTaggingScrCdvT)

**Syntax** vbr-shp <index> pcr <pcr> cdvt <cdvt> scr <scr> mbs <mbs>

**Parameter**

Name	Description
<index>	ATM Descriptor index <b>Valid values:</b> 1 ~ 251 <b>Default value:</b> - <b>Type:</b> Mandatory
<pcr>	Peak cell rate number <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<cdvt>	Cell Delay Variation Tolerance <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<scr>	Sustained Cell Rate <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory
<mbs>	Maximum Burst Size <b>Valid values:</b> 0 ~ 65535 <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.14 Priority List Mode Commands

---

The commands in this section can be executed only in the Priority List execution mode.

### 5.14.1 ds

**Description** Set Differentiated Service of packets to remark VLAN priority / Show Differentiated Service priority list entry / Disable Differentiated Service priority list entry

**Syntax** ds <number> prio <prio ID> {xdsl <port>/<pvc> | gigabit <port>} dscp <dscp>

ds <number> list

ds <number> disable

#### Parameter

Name	Description
<number>	Differentiated Service priority list number. <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority value <b>Valid values:</b> 0~7 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<dscp>	Diffserv Code Points, which is a 6-bit number. The standardized combinations are listed below: default    Default value (bits:000000) af11       Assured Forwarding Class 1:Low Drop (bits:001010)

af12	Assured Forwarding Class 1:Medium Drop (bits:001100)
af13	Assured Forwarding Class 1:High Drop (bits:001110)
af21	Assured Forwarding Class 2:Low Drop (bits:010010)
af22	Assured Forwarding Class 2:Medium Drop (bits:010100)
af23	Assured Forwarding Class 2:High Drop (bits:010110)
af31	Assured Forwarding Class 3:Low Drop (bits:011010)
af32	Assured Forwarding Class 3:Medium Drop (bits:011100)
af33	Assured Forwarding Class 3:High Drop (bits:011110)
af41	Assured Forwarding Class 4:Low Drop (bits:100010)
af42	Assured Forwarding Class 4:Medium Drop (bits:100100)
af43	Assured Forwarding Class 4:High Drop (bits:100110)
ef	Expedited Forwarding (bits:101110)

### 5.14.2 ds list

<b>Description</b>	Show Differentiated Service priority list
<b>Syntax</b>	ds list
<b>Parameter</b>	None

### 5.14.3 dstip

<b>Description</b>	Specify dest IP address of packets to remark vlan priority / Show dest IP address priority list entry / Disable dest IP address priority list entry
<b>Syntax</b>	dstip <number> prio <prio ID> {xdsl <port>/<pvc>   gigabit <port>} ip <ipv4 address> <netmask> dstip <number> list dstip <number> disable

## Parameter

Name	Description
<number>	Destination IP address priority list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority value <b>Valid values:</b> 0~7 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<ipv4 address>	Destination IP address <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> 0.0.0.0 <b>Type:</b> Mandatory
<netmask>	Subnet mask <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Optional

### 5.14.4 dstip list

<b>Description</b>	Show destination IP address priority list
<b>Syntax</b>	dstip list
<b>Parameter</b>	None



## 5.14.5 dstmac

**Description** Specify dest MAC of packets to remark vlan priority / Show dest MAC priority list entry / Disable dest MAC priority list entry

**Syntax** dstmac <number> prio <prio ID> {xdsl <port>/<pvc> | gigabit <port>}  
mac <mac address>

dstmac <number> list

dstmac <number> disable

### Parameter

Name	Description
<number>	Destination MAC priority list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority value <b>Valid values:</b> 0~7 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<mac address>	MAC address <b>Valid values:</b> xx:xx:xx:xx:xx:xx (xx:0~ff) <b>Default value:</b> 00:00:00:00:00:00 <b>Type:</b> Mandatory

### 5.14.6 dstmac list

**Description** Show destination MAC priority list

**Syntax** dstmac list

**Parameter** None

### 5.14.7 ethertype

**Description** Specify Ether Type of packets to remark vlan priority / Show Ether Type priority list entry / Disable Ether Type priority list entry

**Syntax** ethertype <number> prio <prio ID> {xdsl <port>/<pvc> | gigabit <port>} type <ethertype>

ethertype <number> list

ethertype <number> disable

#### Parameter

Name	Description
<number>	ToS (IP Precedence) priority list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority value <b>Valid values:</b> 0~7 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<ethertype>	Ether Type value <b>Valid values:</b> 0x0001 ~ 0xffff <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.14.8 ethertype list

**Description** Show Ether Type priority list

**Syntax** ethertype list

**Parameter** None

### 5.14.9 ipprotocol

**Description** Specify IP protocol of packets to remark vlan priority / Show IP protocol priority list entry / Disable IP protocol priority list entry

**Syntax** ipprotocol <number> prio <prio ID> {xdsl <port>/<pvc> | gigabit <port>}

} protocol <protocol>

ipprotocol <number> list

ipprotocol <number> disable

#### Parameter

Name	Description
<number>	ToS (IP Precedence) priority list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority value <b>Valid values:</b> 0~7 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
protocol	Input protocol name. <b>Valid values:</b>

icmp	(ICMP) Internet Control Message <1>
igmp	(IGMP) Internet Group Management <2>
ipinip	IP in IP (encapsulation) <4>
tcp	(TCP) Transmission Control <6>
grp	(GRP) Globin Reduction Protocol <7>
igp	(IGP) Any private interior gateway <9>
udp	(UDP) User Datagram <17>
gre	(GRE) General Routing Encapsulation <47>
eigrp	EIGRP <88>
ospf	OSPF <89>
<b>Default value:</b> -	
<b>Type:</b> Mandatory	

#### 5.14.10 ipprotocol list

**Description** Show IP protocol priority list

**Syntax** ipprotocol list

**Parameter** None

#### 5.14.11 srcip

**Description** Specify source IP address of packets to remark vlan priority

**Syntax** srcip <number> prio <prio ID> {xdsl <port>/<pvc> | gigabit <port>} ip  
<ipv4 address> <netmask>

srcip <number> list

scrip <number> disable

## Parameter

Name	Description
<number>	Source IP address priority list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority value <b>Valid values:</b> 0~7 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<ipv4 address>	Destination IP address <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> 0.0.0.0 <b>Type:</b> Mandatory
<netmask>	Subnet mask <b>Valid values:</b> xxx.xxx.xxx.xxx (xxx:0~255) <b>Default value:</b> - <b>Type:</b> Optional

### 5.14.12 srcip list

<b>Description</b>	Show source IP address priority list
<b>Syntax</b>	srcip list
<b>Parameter</b>	None

### 5.14.13 srcmac

**Description** Specify source MAC of packets to remark vlan priority

**Syntax** srcmac <number> prio <prio ID> {xdsl <port>/<pvc> | gigabit <port>}  
mac <mac address>

srcmac <number> list

srcmac <number> disable

#### Parameter

Name	Description
<number>	Source mac priority list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority value <b>Valid values:</b> 0~7 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<mac address>	MAC address <b>Valid values:</b> xx:xx:xx:xx:xx:xx (xx:0~ff) <b>Default value:</b> 00:00:00:00:00:00 <b>Type:</b> Mandatory

### 5.14.14 srcmac list

**Description** Show source MAC priority list

**Syntax** srcmac list

**Parameter** None

## 5.14.15 tos

**Description** Specify ToS (IP Precedence) of packets to remark vlan priority / Show ToS (IP Precedence) priority list entry / Disable ToS (IP Precedence) priority list entry

**Syntax** tos <number> prio <prio ID> {xdsl <port>/<pvc> | gigabit <port>} precedence <tos>  
tos <number> list  
tos <number> disable

### Parameter

Name	Description
<number>	ToS (IP Precedence) priority list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority value <b>Valid values:</b> 0~7 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<tos>	Incoming Type of Service. <b>Valid values:</b> 0~7 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.14.16 tos list

**Description** Show ToS (IP Precedence) priority list

**Syntax** tos list

**Parameter** None

### 5.14.17 vlanid

**Description** Specify VLAN ID of packets to remark VLAN priority / Show VLAN id priority list entry / Disable VLAN id priority list entry

**Syntax** vlanid <number> prio <prio ID> {xdsl <port>/<pvc> | gigabit <port>}  
vlan <VLAN ID>

vlanid <number> list

vlanid <number> disable

#### Parameter

Name	Description
<number>	Vlan id priority list number <b>Valid values:</b> 1~256 <b>Default value:</b> - <b>Type:</b> Mandatory
<prio ID>	Priority value <b>Valid values:</b> 0~7 <b>Default value:</b> - <b>Type:</b> Mandatory
<port>	Port number. <b>Valid values:</b> 1~24(48) for xDSL, 1 for GBE <b>Default value:</b> - <b>Type:</b> Mandatory
<pvc>	PVC number <b>Valid values:</b> 1 ~ 8 <b>Default value:</b> - <b>Type:</b> Mandatory
<VLAN ID>	VLAN ID number <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory



### 5.14.18 vlanid list

**Description** Show VLAN id priority list

**Syntax** vlanid list

**Parameter** None

## 5.15 Alarm Profile Mode Commands

---

The commands in this section can be executed only in the Alarm Profile execution mode.

### 5.15.1 alarm mask

**Description** Mask the alarm

**Syntax** alarm mask <name>

**Parameter**

Name	Description
<name>	Name of alarm. <b>Valid values:</b> Refer to Appendix B Alarm Table. <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.15.2 alarm unmask

**Description** Unmask the alarm

**Syntax** alarm unmask <name>

**Parameter**

Name	Description
<name>	Name of alarm. <b>Valid values:</b> Refer to Appendix B Alarm Table. <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.15.3 alarm major

**Description** Set the level of the alarm to Major

**Syntax** alarm major <name>

**Parameter**

Name	Description
<name>	Name of alarm. <b>Valid values:</b> Refer to Appendix B Alarm Table. <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.15.4 alarm minor

**Description** Set the level of the alarm to Minor

**Syntax** alarm minor <name>

**Parameter**

Name	Description
<name>	Name of alarm. <b>Valid values:</b> Refer to Appendix B Alarm Table. <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.16 IGMP-ACL Profile Mode Commands

---

The commands in this section can be executed only in the IGMP-ACL Profile execution mode.

### 5.16.1 igmp-acl

**Description** IGMP group ACL Setting (IP and VLAN) / Delete channel setting

**Syntax** igmp-acl <number> {<ipv4 address> vlan <VLAN ID> | delete}

**Parameter**

Name	Description
<number>	IGMP ACL channel index. <b>Valid values:</b> 1 ~ 256 <b>Default value:</b> - <b>Type:</b> Mandatory
<ipv4 address>	IGMP group address <b>Valid values:</b> 224.0.0.0 ~ 239.255.255.255 The range of addresses from 224.0.0.0 to 224.0.0.255 is reserved for the use of routing protocols and other low-level topology discovery or maintenance protocols. <b>Default value:</b> 0.0.0.0 <b>Type:</b> Mandatory
<VLAN ID>	VLAN ID. <b>Valid values:</b> 1 ~ 4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.16.2 igmp-acl rebind

**Description** IGMP ACL Profile rebind

**Syntax** igmp-acl rebind

**Parameter** None

## 5.17 Rate Limit Profile Mode Commands

---

The commands in this section can be executed only in the Rate Limit Profile execution mode.

### 5.17.1 share-slb

**Description** Set share SLB (Single Leaky Bucket) / Delete the share SLB profile

**Syntax** share-slb <number> {cir <cir> lbs <lbs> | disable}

**Parameter**

Name	Description
number	Share SLB profile index <b>Valid values:</b> 1 ~ 48 <b>Default value:</b> - <b>Type:</b> Mandatory
<cir>	Committed Information Rate (bps) <b>Valid values:</b> 1536 ~ 1000000000 <b>Default value:</b> - <b>Type:</b> Mandatory
<lbs>	Leakage Bucket Size (bits) <b>Valid values:</b> 1 ~ 1024 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.17.2 share-dlb

**Description** Set share DLB (Dual Leaky Bucket) / Delete the share DLB profile

**Syntax** share-dlb <number> {cir <cir> lbs <lbs> eir <eir> lbs <lbs> | disable}

**Parameter**

Name	Description
number	Share DLB profile index <b>Valid values:</b> 1 ~ 48 <b>Default value:</b> - <b>Type:</b> Mandatory
<cir>	Committed Information Rate (bps) <b>Valid values:</b> 1536 ~ 1000000000

	<b>Default value:</b> - <b>Type:</b> Mandatory
<lbs>	First Leakage Bucket Size (bits) <b>Valid values:</b> 1 ~ 1024 <b>Default value:</b> - <b>Type:</b> Mandatory
<eir>	Excess Info Rate (bps) <b>Valid values:</b> 1536 ~ 1000000000 <b>Default value:</b> - <b>Type:</b> Mandatory
<lbs>	Second Leakage Bucket Size (bits) <b>Valid values:</b> 1 ~ 1024 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.17.3 non-share-slb

**Description** Set non-share SLB (Single Leaky Bucket) / Delete the non-share SLB profile

**Syntax** non-share-slb <number> {cir <cir> lbs <lbs> | disable}

**Parameter**

Name	Description
number	Share SLB profile index <b>Valid values:</b> 1 ~ 48 <b>Default value:</b> - <b>Type:</b> Mandatory
<cir>	Committed Information Rate (bps) <b>Valid values:</b> 1536 ~ 1000000000 <b>Default value:</b> - <b>Type:</b> Mandatory
<lbs>	Leakage Bucket Size (bits) <b>Valid values:</b> 1 ~ 1024 <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.17.4 non-share-dlb

**Description** Set non-share DLB (Dual Leaky Bucket) / Delete the non-share DLB profile

**Syntax** non-share-dlb <number> {cir <cir> lbs <lbs> eir <eir> lbs <lbs> | disable}

### Parameter

Name	Description
number	Share DLB profile index <b>Valid values:</b> 1 ~ 48 <b>Default value:</b> - <b>Type:</b> Mandatory
<cir>	Committed Information Rate (bps) <b>Valid values:</b> 1536 ~ 1000000000 <b>Default value:</b> - <b>Type:</b> Mandatory
<lbs>	First Leakage Bucket Size (bits) <b>Valid values:</b> 1 ~ 1024 <b>Default value:</b> - <b>Type:</b> Mandatory
<eir>	Excess Info Rate (bps) <b>Valid values:</b> 1536 ~ 1000000000 <b>Default value:</b> - <b>Type:</b> Mandatory
<lbs>	Second Leakage Bucket Size (bits) <b>Valid values:</b> 1 ~ 1024 <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.18 Service Profile Configure Mode Commands

---

The commands in this section can be executed only in the Service Profile execution mode.

### 5.18.1 bitrate

**Description** Set downstream/upstream Minimum/Maximum/Planned/L2 minimum bit rate

**Syntax** bitrate {ds | us} {min | max | planned | l2} <number>

**Parameter**

Name	Description
number	Bit rate (kb/s). <b>Valid values:</b> 0-65535 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.18.2 delay

**Description** Set downstream/upstream delay introduced by the interleaving

**Syntax** delay {ds | us} <number>

**Parameter**

Name	Description
number	Delay time (ms). <b>Valid values:</b> 1-63 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.18.3 l2-packet

**Description** Set L2 Packet cell

**Syntax** l2-packet <number>

**Parameter**

Name	Description
number	Set L2 Packet cell. <b>Valid values:</b> 0 ~ 28 <b>Default value:</b> - <b>Type:</b> Mandatory



#### 5.18.4 mode

**Description** Set downstream/upstream rate adaptive mode to **init** (rate automatically selected at start up only and does not change after that), **dynamic** (rate automatically selected at initialization and is continuously adapted during show time), or **manual** (rate changed manually)

**Syntax** mode {ds | us} {init | dynamic | manual}

**Parameter** None

#### 5.18.5 noise

**Description** Set downstream/upstream minimum impulse noise protection.

**Syntax** noise {ds | us} <number>

**Parameter**

Name	Description
number	Noise (tenth symbols). <b>Valid values:</b> 0~8 step 0.1 <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.18.6 noisemargin

**Description** Set Downshift/Upshift Noise Margin in downstream/upstream direction

**Syntax** noisemargin {ds | us} {downshift | upshift} <number>

**Parameter**

Name	Description
number	Downshift/Upshift Noise Margin (tenth symbols). <b>Valid values:</b> 0~31 step 0.1 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.18.7 ra-interval

**Description** Set Downshift/Upshift Interval in downstream/upstream direction

**Syntax** ra-interval {ds | us} {downshift | upshift} <number>

**Parameter**

Name	Description
number	Downshift/Upshift interval (seconds). <b>Valid values:</b> 0 ~ 16383 <b>Default value:</b> 10 <b>Type:</b> Mandatory

### 5.18.8 service name

**Description** Set service profile name

**Syntax** service name <string>

**Parameter**

Name	Description
<string>	Profile name. (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.19 Spectrum Profile Configure Mode Commands

---

The commands in this section can be executed only in the Spectrum Profile execution mode.

### 5.19.1 aggregate

**Description** Set downstream/upstream aggregate power level

**Syntax** aggregate {ds | us} max powerlevel <number>

**Parameter**

Name	Description
<number>	Power level (tenth dBm). <b>Valid values:</b> 0~25.5 step 0.1 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.19.2 bands <index> {start | stop}

**Description** Set RF bands

**Syntax** bands <index> {start | stop} <value>

**Parameter**

Name	Description
index	Bands array index. <b>Valid values:</b> 0-7 <b>Default value:</b> - <b>Type:</b> Mandatory
value	Set start / stop frequency (kHz). <b>Valid values:</b> 0-12000 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.19.3 bands <index> mask

**Description** Set bands mask

**Syntax** bands <index> mask <value>

## Parameter

Name	Description
index	Bands array index. <b>Valid values:</b> 0-7 <b>Default value:</b> - <b>Type:</b> Mandatory
value	<b>Valid values:</b> see the following: egress_no_control    egress no control egress_notched      egress notched ingress_low          ingress low ingress_weak         ingress weak ingress_strong        ingress strong rf_signal_am          RF Signal AM Type rf_signal_hamband    RF Signal HAMBAND Type <b>Default value:</b> egress_no_control <b>Type:</b> Mandatory

### 5.19.4 carriermask

**Description** Set carrier mask

**Syntax** carriermask {ds | us} <index> <value>

#### Parameter

Name	Description
index	Carrier mask array index. <b>Valid values:</b> 0-63 <b>Default value:</b> - <b>Type:</b> Mandatory
<value>	Carrier mask array value. <b>Valid values:</b> 0x00~0xff (Hex) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.19.5 message-based

**Description** Set minimum DS/US message-based data rate that is needed by ATU

**Syntax** message-based {ds | us} min <number>

**Parameter**

Name	Description
<number>	Min downstream/upstream message-based data rate. <b>Valid values:</b> 4 ~ 28 kbps <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.19.6 modem features

**Description** Set modem features enable/disable

**Syntax** modem features {enable | disable}

**Parameter** None

### 5.19.7 noisemargin

**Description** Set downstream/upstream maximum / minimum / target noise margin

**Syntax** noisemargin {ds | us} {max | min | target} <number>

**Parameter**

Name	Description
<number>	Noise margin value. <b>Valid values:</b> 0~31 (or 51.1 means no max noise margin is used) step 0.1. <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.19.8 opmode

**Description** Set Operational mode

**Syntax** opmode {set | clear} <opmode id>

**Parameter**

Name	Description
opmode id	The ID of allowed ADSL modes of operation. <b>Valid values:</b> Use 'list opmode' command to

	see all the operation modes. <b>Default value:</b> - <b>Type:</b> Mandatory
--	---

#### 5.19.9 pbomode

**Description** Set power backoff operation mode ON/OFF

**Syntax** pbomode us {on | off}

**Parameter** None

#### 5.19.10 power-mgt disable

**Description** Disable power management function for ADSL

**Syntax** power-mgt disable

**Parameter** None

#### 5.19.11 power-mgt l2 enable

**Description** Allow autonomous L2 state entry/exit

**Syntax** power-mgt l2 enable

**Parameter** None

#### 5.19.12 power-mgt l2\_l3 enable

**Description** Allow autonomous L2 and L3 state entry/exit

**Syntax** power-mgt l2\_l3 enable

**Parameter** None

#### 5.19.13 power-mgt l0-time

**Description** Set the minimum time (in seconds) between Exit from L2 low power state and the next Entry into the L2 low power state

**Syntax** power-mgt l0-time <number>

**Parameter**

Name	Description
<number>	L0 Time value. <b>Valid values:</b> 0 ~ 255 (sec) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.19.14 power-mgt l2-time

**Description** Set minimum time (in seconds) between an Entry into L2 low power state and the first L2 low power trim request, and between two consecutive L2 power trim requests

**Syntax** power-mgt l2-time <number>

**Parameter**

Name	Description
<number>	L2 Time value. <b>Valid values:</b> 0 ~ 255 (sec) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.19.15 power-mgt l2-atpr

**Description** Set maximum aggregate transmit power reduction (in dB) that is allowed at transition of L0 to L2 state or an L2 low power trim request

**Syntax** power-mgt l2-atpr <number>

**Parameter**

Name	Description
<number>	L2 power reduction range value. <b>Valid values:</b> 0 ~ 31 (dB) <b>Default value:</b> - <b>Type:</b> Mandatory

#### 5.19.16 power-mgt l2-atprt

**Description** Set total maximum aggregate transmit power reduction (in dB) that is allowed in the L2 state; the total reduction is the sum of all reductions of L2 Request (i.e., at transition of L0 to L2 state) and L2 power trims

**Syntax** power-mgt l2-atprt <number>

**Parameter**

Name	Description
<number>	L2 total power reduction value. <b>Valid values:</b> 0 ~ 31 (dB) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.19.17 psdlevel

**Description** Set PSD level

**Syntax** psdlevel {ds | us} max <number>

**Parameter**

Name	Description
<number>	Maximum PSD level (tenth dBm/Hz). <b>Valid values:</b> -60 ~ -40 downstream step 0.1 -60 ~ -38 upstream. step 0.1 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.19.18 psdshape

**Description** Set PSD shape

**Syntax** psdshape ds {cut-off <number> | standard}

**Parameter**

Name	Description
number	Cut-off frequencies at carrier. <b>Valid values:</b> 100-280 step 10 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.19.19 rxaggregate us max powerlevel

**Description** Set maximum aggregate receive power level

**Syntax** rxaggregate us max powerlevel <number>

**Parameter**

Name	Description
<number>	Maximum aggregate receive power level (-255~255 tenth dBm). <b>Valid values:</b> -25.5~25.5 step 0.1 <b>Default value:</b> - <b>Type:</b> Mandatory



### 5.19.20 spectrum name

**Description** Set spectrum profile name

**Syntax** spectrum name <string>

**Parameter**

Name	Description
<string>	Name of the spectrum profile. (max 31 characters) <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.19.21 status modify complete

**Description** Set the status of modification

**Syntax** status modify complete

**Parameter** None

## 5.20 TCA Profile Mode Commands

---

The commands in this section can be executed only in the TCA Profile execution mode.

### 5.20.1 adsl-tca day

**Description** Set threshold value for near-end/far-end day PM

**Syntax** adsl-tca day {ne | fe} {es | ses | uas} <number

**Parameter**

Name	Description
number	Threshold value. <b>Valid values:</b> 0-86400 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.20.2 adsl-tca disable

**Description** Disable TCA

**Syntax** adsl-tca disable

**Parameter** None

### 5.20.3 adsl-tca enable

**Description** Enable TCA

**Syntax** adsl-tca enable

**Parameter** None

### 5.20.4 adsl-tca interval

**Description** Set threshold value for near-end/far-end interval PM

**Syntax** adsl-tca interval {ne | fe} {es | ses | uas | lof | lol | los | errframe}  
<number

**Parameter**

Name	Description
number	Threshold value. <b>Valid values:</b> 0-900 <b>Default value:</b> - <b>Type:</b> Mandatory

## 5.21 Dot1x Mode Commands

---

The commands in this section can be executed only in the Dot1x execution mode.

### 5.21.1 auth-method

**Description** Set priorities of the different authentication methods

**Syntax** auth-method <index> {none | radius\_1 | radius\_2 | radius\_3 | profile}

**Parameter**

Name	Description
index	Authentication method priority. <b>Valid values:</b> 1-4 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.21.2 server <number> ip

**Description** Set RADIUS Server IP address

**Syntax** server <index> ip <ipv4 address>

**Parameter**

Name	Description
index	RADIUS Server index. <b>Valid values:</b> 1-3 <b>Default value:</b> - <b>Type:</b> Mandatory
ipv4 address	RADIUS Server IP address <b>Valid values:</b> - <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.21.3 server <number> auth-port

**Description** Set the port number for RADIUS Authentication in the Layer-4 header

**Syntax** server <index> auth-port <number>

#### Parameter

Name	Description
index	RADIUS Server index. <b>Valid values:</b> 1-3 <b>Default value:</b> - <b>Type:</b> Mandatory
number	RADIUS Server authentication port <b>Valid values:</b> - <b>Default value:</b> 1812 <b>Type:</b> Mandatory

### 5.21.4 server <number> acct-port

**Description** Set the port number for RADIUS Accounting in the Layer-4 header

**Syntax** server <index> acct-port <number>

#### Parameter

Name	Description
index	RADIUS Server index. <b>Valid values:</b> 1-3 <b>Default value:</b> - <b>Type:</b> Mandatory
number	RADIUS Server accounting port <b>Valid values:</b> - <b>Default value:</b> 1813 <b>Type:</b> Mandatory

### 5.21.5 server <number> max-fail

**Description** Set the maximum allowable times of continuously failed authentication attempts

**Syntax** server <index> max-fail <number>

#### Parameter

Name	Description
index	RADIUS Server index. <b>Valid values:</b> 1-3 <b>Default value:</b> - <b>Type:</b> Mandatory
number	RADIUS Server maximum fail number <b>Valid values:</b> 1-10 <b>Default value:</b> 2 <b>Type:</b> Mandatory

### 5.21.6 server <number> secret

**Description** Set the authentication key in text format

**Syntax** server <index> secret <string>

#### Parameter

Name	Description
index	RADIUS Server index. <b>Valid values:</b> 1-3 <b>Default value:</b> - <b>Type:</b> Mandatory
string	Secret ID checked between NAS and RADIUS server <b>Valid values:</b> max 16 character <b>Default value:</b> <b>Type:</b> Mandatory

### 5.21.7 server <index> vlan <number>

**Description** The VID of the VLAN which the RADIUS server belongs to

**Syntax** server <index> vlan <number>

**Parameter**

Name	Description
index	RADIUS Server index <b>Valid values:</b> 1-3 <b>Default value:</b> - <b>Type:</b> Mandatory
number	VLAN ID <b>Valid values:</b> 1-4094 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.21.8 server <number> delete

**Description** Delete a RADIUS server setup in the system

**Syntax** server <index> delete

**Parameter**

Name	Description
index	RADIUS Server index. <b>Valid values:</b> 1-3 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.21.9 profile delete

**Description** Delete an authentication local profile in the system

**Syntax** profile <index> delete

**Parameter**

Name	Description
index	Authenticate profile index. <b>Valid values:</b> 1-64 <b>Default value:</b> - <b>Type:</b> Mandatory

### 5.21.10 profile <index> username <string> password

**Description** Set the username and password for a authentication local profile

**Syntax** profile <index> username <string> password <string>

**Parameter**

Name	Description
index	Authenticate profile index. <b>Valid values:</b> 1-64 <b>Default value:</b> - <b>Type:</b> Mandatory
string	Setting username of Authenticate profile <b>Valid values:</b> max 16 character <b>Default value:</b> - <b>Type:</b> Mandatory
string	Setting password of Authenticate profile <b>Valid values:</b> max 16 character <b>Default value:</b> - <b>Type:</b> Mandatory

# Appendix A ADSL Operational Mask Table

**Table A-1 ADSL Operational Mask**

Bit	Description	Bit	Description
0	ANSI_T1.413	32	992_4_I_AllDigital_NonOverlapped
1	ETSI_DTS_TM06006	33	992_4_I_AllDigital_Overlapped
2	992_1_A_Pots_NonOverlapped	34	992_3_L_Pots_NonOverlapped_Mode1
3	992_1_A_Pots_Overlapped	35	992_3_L_Pots_NonOverlapped_Mode2
4	992_1_B_Isdn_NonOverlapped	36	992_3_L_Pots_Overlapped_Mode3
5	992_1_B_Isdn_Overlapped	37	992_3_L_Pots_Overlapped_Mode4
6	992_1_C_TcmIsdn_NonOverlapped	38	992_3_M_Pots_Extend_US_Overlapped
7	992_1_C_TcmIsdn_Overlapped	39	992_3_M_Pots_Extend_US_NonOverlapped
8	992_2_A_Pots_NonOverlapped	40	992_5_A_Pots_NonOverlapped
9	992_2_B_Pots_Overlapped	41	992_5_A_Pots_Overlapped
10	992_2_C_TcmIsdn_NonOverlapped	42	992_5_B_Isdn_NonOverlapped
11	992_2_C_TcmIsdn_Overlapped	43	992_5_B_Isdn_Overlapped
18	992_3_A_Pots_NonOverlapped	46	992_5_I_AllDigital_NonOverlapped
19	992_3_A_Pots_Overlapped	47	992_5_I_AllDigital_Overlapped
20	992_3_B_Isdn_NonOverlapped	48	ANSI_T1.424
21	992_3_B_Isdn_Overlapped	49	ETSI_TS_101_270
24	992_4_A_Pots_NonOverlapped	50	993_1
25	992_4_A_Pots_Overlapped	51	IEEE_8023ah
28	992_3_I_AllDigital_NonOverlapped	56	992_5_J_AllDigital_NonOverlapped
29	992_3_I_AllDigital_Overlapped	57	992_5_J_AllDigital_Overlapped
30	992_3_J_AllDigital_NonOverlapped	58	992_5_M_Pots_Extend_US_NonOverlapped
31	992_3_J_AllDigital_Overlapped	59	992_5_M_Pots_Extend_US_Overlapped



# Appendix B Alarm Table

**Table B-1 Alarm Table**

Alarm ID	Name	Description
104	alm_fan_fail	System Fan Fail
105	alm_self_test_fail	System Self Test Fail
106	alm_above_temper	System Above Temperature
107	alm_below_temper	System Below Temperature
118	alm_dsl_dsp	System DSP Fail
601	alm_adsl_los	Near-end Loss of Signal
602	alm_adsl_lof	Near-end Loss of Frame
603	alm_adsl_lom	Near-end Loss of Margin
610	alm_adsl_lcd	Near-end Loss Cell Delineation
612	alm_adsl_ncd	Near-end No Cell Delineation
613	alm_adsl_los_fe	Far-end Loss of Signal
614	alm_adsl_lof_fe	Far-end Loss of Frame
615	alm_adsl_lom_fe	Far-end Loss of Margin
616	alm_adsl_lopwr_fe	Far-end Loss of Power
619	alm_adsl_commf_fe	Far-end Communication Failure
620	alm_adsl_nopeer_fe	Far-end No Peer Present
622	alm_adsl_lcd_fe	Far-end Loss Cell Delineation
624	alm_adsl_ncd_fe	Far-end No Cell Delineation

## Appendix C Cleaning the AIR Filter

For better condition of cool system, please remember to clean the Air Filter every three months. This section provides the procedure for how to clean the **Air Filter**

### Procedure :

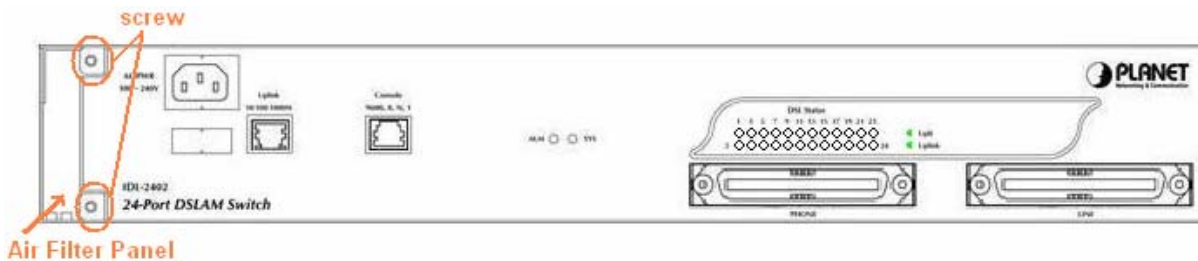
---

#### Note:

Before cleaning the Air Filter, please power-off the IDL-2402 first.

You must loosen the connection of the Air Filter Panel to the DSLAM and pull out the Air Filter before cleaning the air filter.

---



- 1 Put on the antistatic wrist strap and connect it to a grounding point.
- 2 Turn the screw on the Air Filter Panel counterclockwise until it loosens the connection of the panel to the DSLAM. Remove the Air Filter Panel.
- 3 Pull the air filter out of the DSLAM.
- 4 Wash and clean the dust that on the Air Filter.
- 5 Slide the cleaned Air Filter into the Air Filter slot of the DSLAM.
- 6 Reinstall the Air Filter Panel.

# Appendix D Introduction for Troubleshooting

This chapter describes instructions for the IDL-2402 system problems. These procedures may require the presence of technicians at remote IDL-2402 system sites and plus an operator at PC to monitor system alarms by console during maintenance.

## Resolving Problems Indicated Through LEDs

This section describes what to do to solve problems indicated by LEDs on the system front panel.

### Problems Indicated by LEDs

LED	Activity	Problem	Action
SYS	Not lit even though DSLAM is powered up	There is a power up problem with the system.	Troubleshoot the DSLAM for power up problems; see troubleshooting section.
	Red	Self-test failed. There is a functional problem with the system.	Replace the DSLAM.
ALM	Red	Major alarm set	See troubleshooting section
	Red-Flash	Major and Minor alarm set	See troubleshooting section.
	Yellow	Minor alarm set	See troubleshooting section.

## Resolving Problems Indicated Through Alarms

Alarms of the system are viewed through CLI and Web GUI.

If an alarm indicates a problem, please refer to troubleshooting procedures section.

## Troubleshooting Procedures for the IDL-2402

When you follow a troubleshooting procedure, start from the first step of the procedure. If the first step does not solve the problem, proceed to the next step; keep going through the steps until the problem is solved. Use the following table to find out the appropriate procedure for troubleshooting the listed problems.

## List of Troubleshooting Procedures

Type of problem	Procedure Number
IDL-2402 power up problems	Procedure 1
ADSLx service problems (POTS service is ok)	Procedure 2
POTS service problems (ADSLx service is ok)	Procedure 3
Subscriber service problems (no POTS and ADSLx service)	Procedure 4

### **Procedure 1 : Troubleshooting for Power Up Problems**

#### **Problem indication:**

- The SYS LED on the front panel is not lit even though the DSLAM is powered up
- Alarm that indicates a system power up problem
- Subscribers connected to the DSLAM do not have DSL service; POTS service is ok

#### **Procedure:**

1. Check that the power cord is connected to the power socket on the front panel, and the other end of the cord is connected to a power outlet.
2. Check that the power feeds are connected to the DSLAM, and that power is present on the two power feeds with correct polarity.
3. Replace the IDL-2402.
4. Contact your local distributor.

## **Procedure 2 Troubleshoot ADSLx Service Problems**

### **Problem indication:**

No ADSLx service to the affected subscribers (POTS service is ok).

### **Procedure:**

- 1** If all subscribers connected to the DSLAM are affected, and the SYS LED on the front panel is not lit, check the both end of power cords:
  - If one of the power cords is not connected, power up the DSLAM by plugging the power cord to the power socket/power outlet.
  - If the power cords are both connected, follow **Procedure 1** to troubleshoot the DSLAM for power up problem
- 2** If all subscribers are affected, check the SYS LED on the front panel; if it is red, replace the DSLAM.
- 3** If only some subscribers are affected, identify the ports that have problems. Check that the subscribers are connected to the line interfaces properly.
- 4** Contact your local distributor.

## **Procedure 3 Troubleshoot POTS Service Problems**

### **Problem indication:**

No POTS service to the affected subscribers (ADSLx service is ok).

### **Procedure:**

- 1** Check the connection of the POTS lines at the POTS connector for the DSLAM.
- 2** Use a bridging connector to couple the POTS and subscriber lines. If this solves the problem, replace the DSLAM.
- 3** Check the condition of the POTS lines and connectors.

## **Procedure 4 Subscriber Service Problems**

### **Problem indication:**

No POTS and ADSLx service to the affected subscribers.

### **Procedure:**

- 1** Check the connection of the subscriber lines and POTS lines at the subscriber line connector for DSLAM for subscribers that do not have POTS and ADSLx service.
  - If this step results in POTS service to the affected subscribers but there is still no ADSLx service to them, follow **Procedure 2** to troubleshoot ADSLx service problems.
  - If this step results in ADSL service to the affected subscribers but there is still no POTS service to them, follow **Procedure 3** to troubleshoot POTS service problems.
- 2** Use a bridging connector to couple the POTS and subscriber lines. If this results in POTS service to the affected subscribers, contact your distributor.
- 3** Check the condition of the subscriber lines and connectors.

## EC Declaration of Conformity

For the following equipment:

\*Type of Product : 24-Port IP DSLAM  
\*Model Number : IDL-2402

\* Produced by:

Manufacturer's Name: **Planet Technology Corp.**  
Manufacturer's Address: 11F, No. 96, Min Chuan. Road, Hsin Tien  
Taipei, Taiwan, R.O.C.

is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (89/336/EEC, Amended by 92/31/EEC, 93/68/EEC & 98/12/EC).

For the evaluation regarding the Electromagnetic Compatibility, the following standards were applied:

EN 300 386	(V1.3.3:2005)
EN 55022	(1998 + A1:2000 + A2:2003,Class A)
EN 61000-3-2	(2000, Class A)
EN 61000-3-3	(1995 + A1:2001)
EN 61000-4-2	(1995 + A1:1998 + A2 :2001)
EN 61000-4-3	(1996 + A1:1998 + A2 :2001)
EN 61000-4-4	(2004)
EN 61000-4-5	(1995 + A1:2001)
EN 61000-4-6	(1996 + A1:2001)

**Responsible for marking this declaration if the:**

**Manufacturer**       **Authorized representative established within the EU**

**Authorized representative established within the EU (if applicable):**

**Company Name:** Planet Technology Corp.

**Company Address:** 11F, No.96, Min Chuan Road, Hsin Tien, Taipei, Taiwan, R.O.C

**Person responsible for making this declaration**

**Name, Surname** Allen Huang

**Position / Title :** Product Manager

Taiwan  
Place

30th Oct., 2008  
Date

Allen  
Legal Signature

### **PLANET TECHNOLOGY CORPORATION**

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